Models C708/C709/C716/C717

Heat Treatment
Soft Serve Freezers

Service Manual

059061-S

Carrier
A United Technologies Company

TAYLOR®

6/13/08

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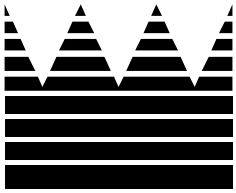
CAUTION: Information in this manual is intended to be used by Taylor Authorized Service Technicians only.

Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

TAYLOR®

Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072

Notes:



Section 1: Introduction

- **Safety**
- **Refrigerant**
- **Specifications**
- **General Installation Instructions**
- **Running Specifications**
- **Important to the Operator**

Safety

We at Taylor are committed to manufacturing safe operating and serviceable equipment. The many built-in safety features that are part of all Taylor equipment are aimed at protecting operators and trained service technicians alike.

This manual is intended exclusively for Taylor authorized service personnel.

 This equipment must be properly grounded. Failure to follow this instruction may result in serious electrical shock.

 Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation. Failure to follow this instruction may result in electrocution.

 This equipment is provided with a grounding lug that is to be properly attached to the rear of the frame by the authorized installer. The installation location is marked by the equipotential bonding symbol (5021 of IEC 60417-1) on the removable panel and the frame.

 These machines must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.

 **DO NOT** install the unit in an area where a water jet could be used to clean or rinse the freezer. Failure to follow this instruction may result in serious electrical shock.

These machines are designed to operate indoors, under normal ambient temperatures of 70°-75°F (21°-24°C). The machines have successfully performed in high ambient temperatures of 104°F (40°C) at reduced capacities.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

Refrigerant

Taylor uses R404A refrigerant. This refrigerant is generally considered non-toxic and non-flammable; however, any gas under pressure is potentially hazardous.

 NEVER fill any refrigerant cylinder completely with liquid. Filling the cylinder to approximately 80% will allow for normal expansion.

 Refrigerant liquid sprayed onto the skin may cause serious damage to tissue. Keep eyes and skin protected. If refrigerant burns should occur, flush immediately with cold water. If burns are severe, apply ice packs and contact a physician immediately.

 Taylor reminds technicians to be cautious of government laws regarding refrigerant recovery, recycling, and reclaiming systems. If you have any questions regarding these laws, please contact the factory Service Department.

WARNING: R404A refrigerant used in conjunction with polyolester oils is extremely moisture absorbent. When opening a refrigeration system, the maximum time the system is open must not exceed 15 minutes. Cap all open tubing to prevent humid air or water from being absorbed by the oil.

 If the crossed out wheeled bin symbol is affixed to this product, it signifies that this product is compliant with the EU Directive as well as other similar legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed, and cannot be disposed as unsorted municipal waste.

The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this machine are warranted for the term indicated on the warranty card accompanying this machine. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed; thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that, in the event of ordinary service to this machine's refrigeration system, only the refrigerant specified on the affixed data label should be used. The unauthorized use of alternate refrigerants will void your compressor warranty. It will be the owners' responsibility to make this fact known to any technicians they employ.

It should be noted, that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms. Taylor does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five year warranty of the compressor.

Taylor will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the model/serial number of the unit in question.

Model C708 Specifications

Freezing Cylinder

One, 3.4 quart (3.2 liter)

Mix Hopper

One, 20 quart (18.9 liter)

Beater Motor

One, 1.5 hp

Refrigeration Unit

One, approximately 9,500 btu/hr compressor. Refrigerant R404A.

Electrical

Electrical	One dedicated connection.	
	Maximum Fuse Size	Minimum Circuit Ampacity
208-230/60/1 Air	30	23
208-230/60/3 Air	25	18
220-240/50/1 Air	25	21
220-240/380-415/50/3 Air	12	9

This unit may be manufactured in other electrical characteristics. Refer to the local Taylor Distributor for availability. (For exact electrical information, always refer to the data label of the unit.)

Air Cooled

Clearance: A minimum of 6” (152 mm) is required on both sides, and the back of the unit placed against the wall to prevent recirculation of warm air. An optional air discharge chute is available to direct heated air exhaust upward. No clearance is required on the right side if the air discharge chute is used.

Water Cooled

Water inlet and drain connections on the right side or under the side of the base, 3/8” FPT.

Dimensions

Width: 18-1/4” (464 mm)
Height: 33-7/8” (860 mm)
Depth: 34” (864 mm)
Floor Clearance: Rests on a plastic pad directly on counter top.

Approximate Weights

Net: 369 lbs. (167.4 kgs)
Crated: 470 lbs. (213.2 kgs)
Volume: 30.6 cu. ft. (0.86 cu m)

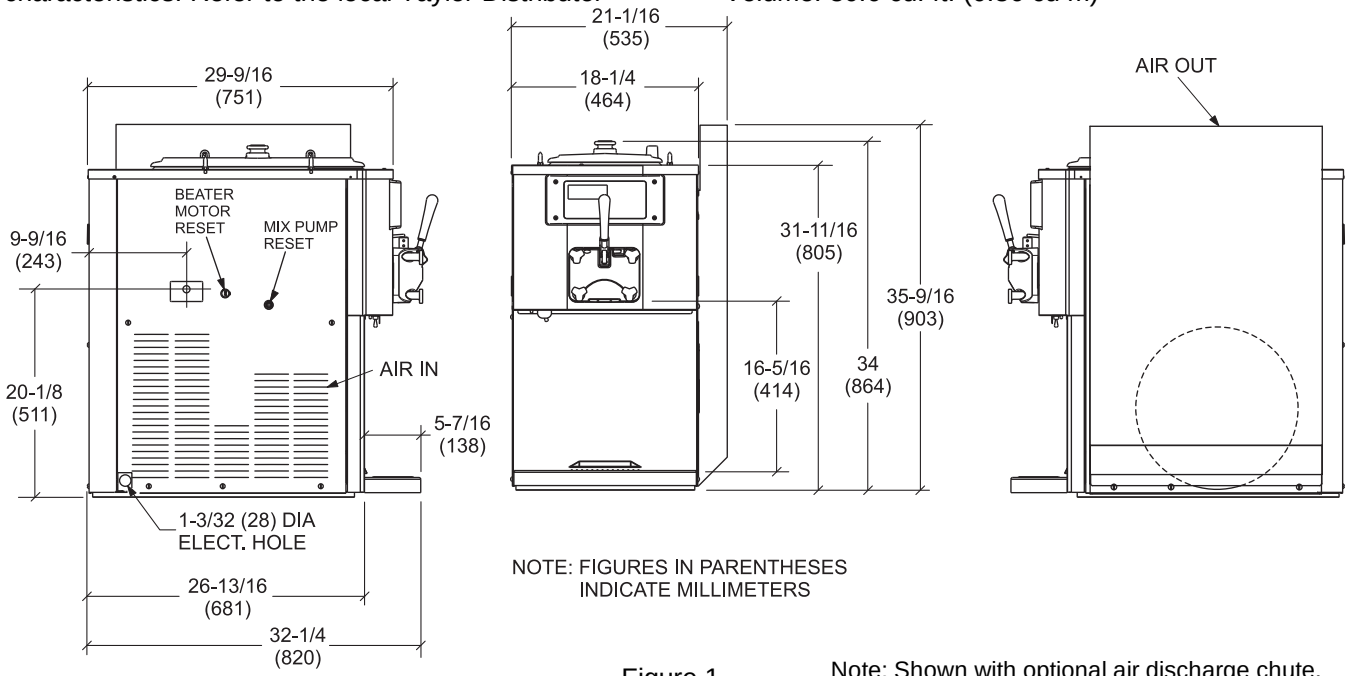


Figure 1

Note: Shown with optional air discharge chute.

Model C709 Specifications

Freezing Cylinder

One, 3.4 quart (3.2 liter)

Mix Hopper

One, 20 quart (18.9 liter)

Beater Motor

One, 1.5 hp

Refrigeration Unit

One, approximately 9,500 btu/hr compressor.
Refrigerant R404A.

Electrical

Electrical	One dedicated connection.	
	Maximum Fuse Size	Minimum Circuit Ampacity
208-230/60/1 Air	30	22
208-230/60/3 Air	15	13
220-240/50/1 Air	20	18
220-240/380-415/50/3 Air	10	8

This unit may be manufactured in other electrical characteristics. Refer to the local Taylor Distributor for availability. (For exact electrical information, always refer to the data label of the unit.)

Air Cooled

Clearance: A minimum of 6” (152 mm) is required on both sides, and the back of the unit placed against the wall to prevent recirculation of warm air. An optional air discharge chute is available to direct heated air exhaust upward. No clearance is required on the right side if the air discharge chute is used.

Water Cooled

Water inlet and drain connections on the right side or under the side of the base, 3/8” FPT.

Dimensions

Width: 18-1/4” (464 mm)
Height: 33-7/8” (860 mm)
Depth: 34” (864 mm)
Floor Clearance: Rests on a plastic pad directly on counter top.

Approximate Weights

Net: 335 lbs. (152.0 kgs)
Crated: 375 lbs. (170.1 kgs)
Volume: 30.6 cu. ft. (0.86 cu m)

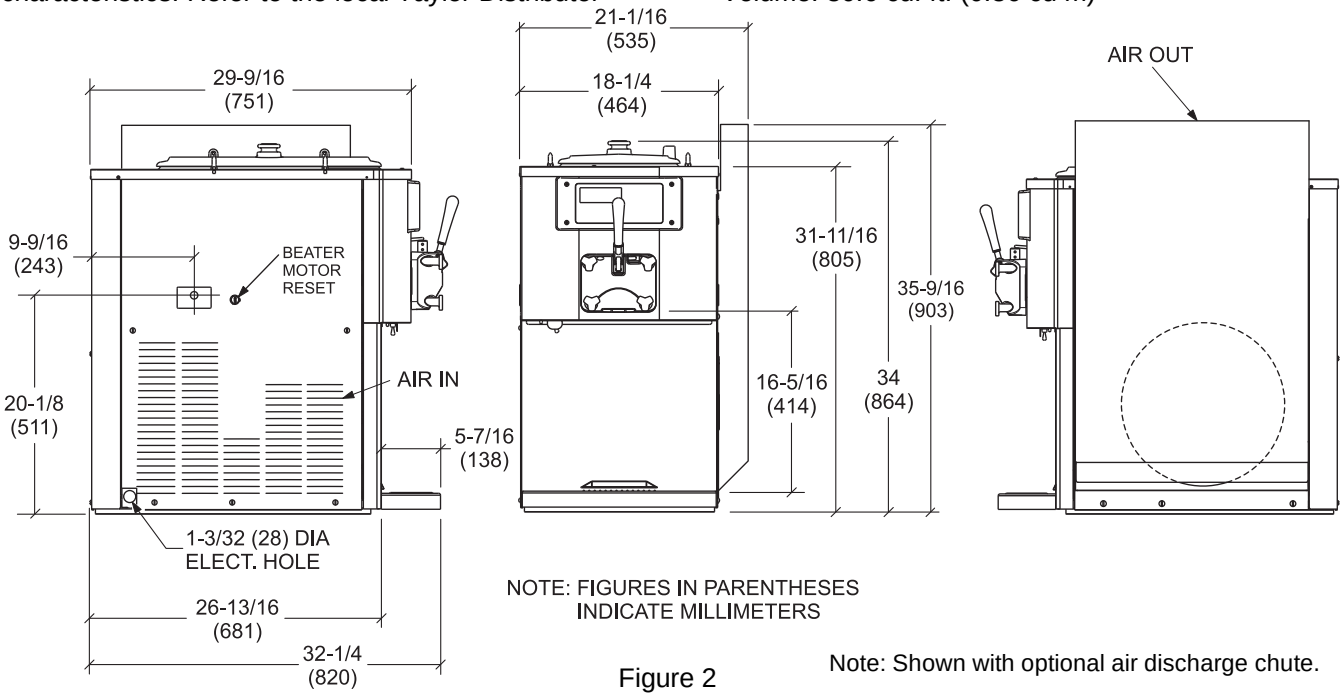


Figure 2

Note: Shown with optional air discharge chute.

Model C716 Specifications

Freezing Cylinder

Two, 3.4 quart (3.2 liter)

Mix Hopper

Two, 20 quart (18.9 liter)

Beater Motor

Two, 1.5 hp

Refrigeration Unit

Two, approximately 9,500 btu/hr compressors
Refrigerant R404A.

Electrical

Electrical	Maximum Fuse Size		Minimum Circuit Ampacity	
	Left	Right	Left	Right
208–230/60/1 Air	35	30	26	23
208–230/60/1 Water	30	30	23	23
208–230/60/3 Air	25	25	20	18
220–240/50/1 Air	30	25	23	20
380–415/50/3N~Air	12	12	12	9

This unit may be manufactured in other electrical characteristics. Refer to the local Taylor Distributor for availability. (For exact electrical information, always refer to the data label of the unit.)

Air Cooled

Clearance: A minimum of 3” (76 mm) is required around all sides. Install the deflector provided to prevent recirculation of warm air.

Water Cooled

Water inlet and drain connections under the side of the base, 1/2” FPT.

Dimensions

Width: 25-7/16” (646 mm)
Height: 60” (1524 mm)
Depth: 36-3/16 (919 mm)
Floor Clearance*: 4-3/4 (121 mm)
**Mounted on standard casters*

Approximate Weights

Net: 778 lbs. (353 kgs)
Crated: 816 lbs. (370 kgs)
Volume: 66.5 cu. ft. (1.88 cu. m.)

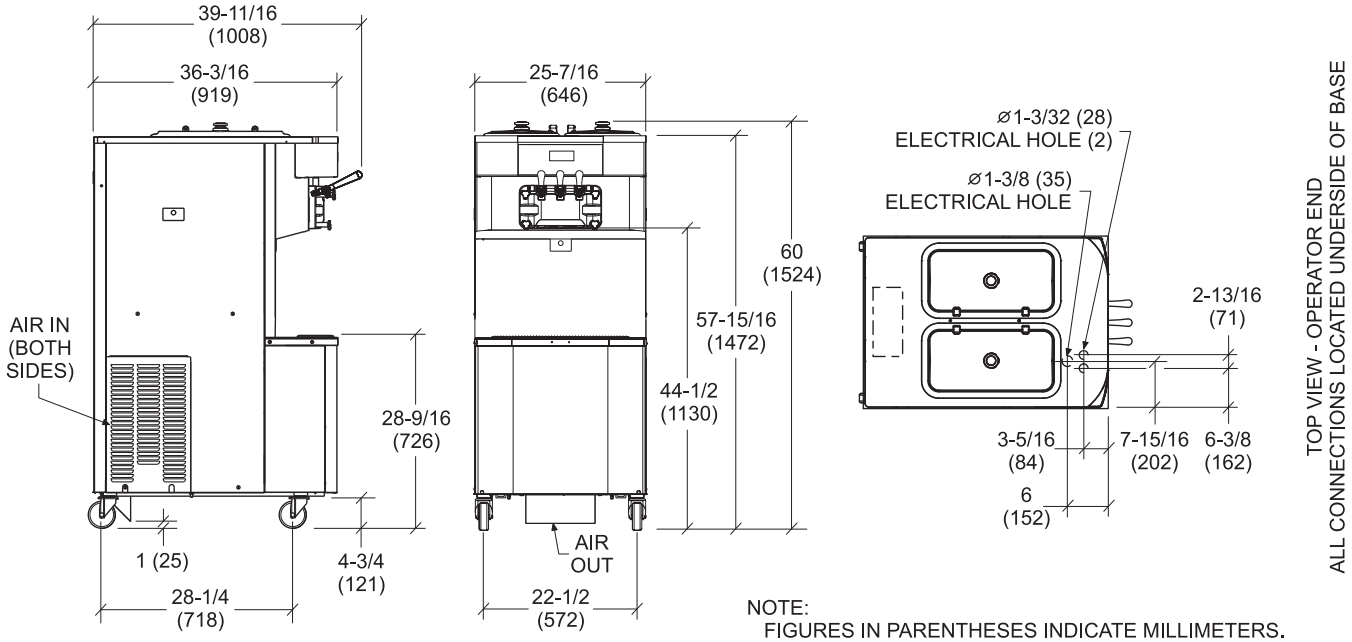


Figure 3

Model C717 Specifications

Freezing Cylinder

Two, 3.4 quart (3.2 liter)

Mix Hopper

Two, 20 quart (18.9 liter)

Beater Motor

Two, 1.5 hp

Refrigeration Unit

Two, approximately 9,500 btu/hr compressors
Refrigerant R404A.

Electrical

Electrical	Maximum Fuse Size		Minimum Circuit Ampacity	
	Left	Right	Left	Right
208–230/60/1 Air	30	30	24	21
208–230/60/3 Air	20	15	16	13
208–230/60/3 Water	15	15	13	13
220–240/50/1 Air	25	20	20	17
380–415/50/3N~Air	12	10	10	7

This unit may be manufactured in other electrical characteristics. Refer to the local Taylor Distributor for availability. (For exact electrical information, always refer to the data label of the unit.)

Air Cooled

Clearance: A minimum of 3” (76 mm) is required around all sides. Install the deflector provided to prevent recirculation of warm air.

Water Cooled

Water inlet and drain connections under the side of the base, 1/2” FPT.

Dimensions

Width: 25-7/16” (646 mm)
Height: 60” (1524 mm)
Depth: 36-3/16 (919 mm)
Floor Clearance*: 4-3/4 (121 mm)
**Mounted on standard casters*

Approximate Weights

Net: 728 lbs. (330 kgs)
Crated: 766 lbs. (348 kgs)
Volume: 66.5 cu. ft. (1.88 cu. m.)

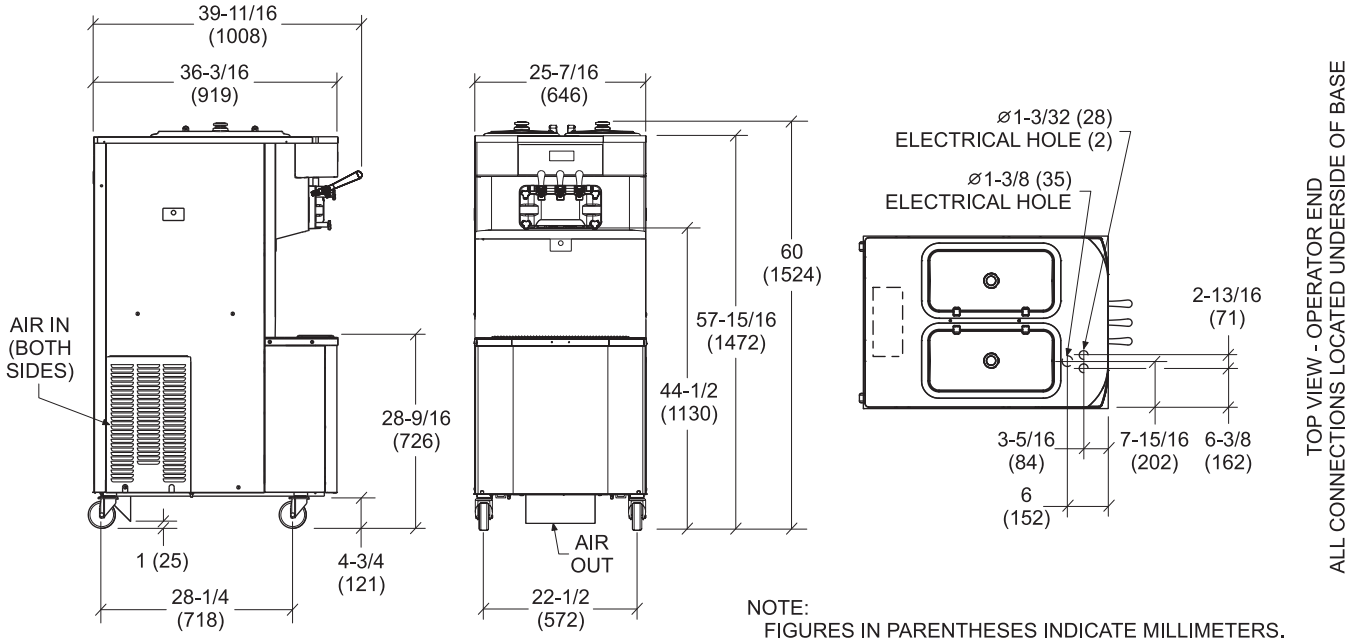


Figure 4

General Installation Instructions

The following are general installation instructions. For complete installation details, please see the check out card.

 Disconnect Switch

If the unit has no plug, a separate disconnect switch must be installed, or another alternate means to disconnect power must be implemented.

Air Cooled Units

C708 & C709: These units require a minimum of 6" (152 mm) air clearance on both sides, and the back of the unit placed against the wall to prevent recirculation of warm air. An optional air discharge chute is available to direct heated air exhaust upward. No clearance is required on the right side if the air discharge chute is used.

C716 & C717: These units require a minimum of 3" (76 mm) air clearance around all sides. Install the deflector provided to prevent recirculation of warm air.

Refrigeration

Main Compressor:

Air cooled units: 40 oz (1,134 g) of R404A.
Water cooled units: 38 oz (1,077g) of R404A.

Gear Alignment and Rear Shell Bearing

1. Make certain the drive shaft(s) can easily slide in and out of the female socket on the gear unit(s).
2. If a drive shaft is binding, the gear unit could be out of alignment (loose). Check the bolts on the gear unit to be sure they are tight.
3. Inspect the rear shell bearing for tightness. Be sure the locking tab has been folded over to prevent the nut from loosening.

Beater Rotation

 **REMEMBER TO DISCONNECT ALL POWER TO THE FREEZER!** Failure to follow this instruction may result in electrocution or severe personal injury from hazardous moving parts.

1. Remove the door assembly, beater and scraper blades.
2. Place a magnet over the door switch in the front panel. This deactivates the safety feature which prevents the operation of the machine when the door is not installed.
3. Place the power switch in the ON position.
4. Press the WASH symbol on the control panel. This activates the beater motor only.
5. Look into the freezing cylinder. The drive shaft should be turning clockwise. (If necessary, lift the swing panel to view rotation.)
6. Press the WASH symbol again to stop the beater motor.

Note: Repeat these steps for the other side on the model C716 & C717.

To correct rotation on a single-phase unit, exchange leads inside the beater motor. (Follow the diagram printed on the motor.)

To correct rotation on a three-phase unit, interchange any two incoming power supply lines at freezer main terminal block only.

 **REMEMBER TO DISCONNECT ALL POWER TO THE FREEZER!** Failure to follow this instruction may result in electrocution or severe personal injury from hazardous moving parts.

Pump Motor Rotation

1. Remove the air/mix pump assembly.

2. Connect power to the freezer and place the power switch in the ON position.

3. Press the PUMP symbol on the control panel. This will activate the pump motor only.

4. Observe the pump ball crank. It should be rotating counterclockwise.

If rotation is not correct, refer to the wiring diagram on the pump motor and re-wire accordingly.

Note: Repeat these steps for the other side on the model C716 & C717.

REMEMBER TO DISCONNECT ALL POWER TO THE FREEZER! Failure to follow this instruction may result in electrocution or severe personal injury from hazardous moving parts.

Electrical Connections

Each freezer requires one power supply. Check the data label on the freezer for fuse, circuit ampacity and electrical specifications. Refer to the wiring diagram provided inside the control box for proper power connections.

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of the NEC code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.

Stationary appliances which are not equipped with a power cord and a plug or other device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.

Installation of Optional Syrup Rail X48015-27 (C708 & C709 Only)

The syrup rail can mount to only the left side of the C708 or C709 if the top air discharge chute is not used.

The syrup rail can be mounted to either the left or right side of the C708 or C709 units if a top air discharge chute is used.

Perform the following steps to mount the syrup rail on the side of a unit where a top air discharge chute is not installed:

1. Remove the (4) panel screws as shown in Figure 5.

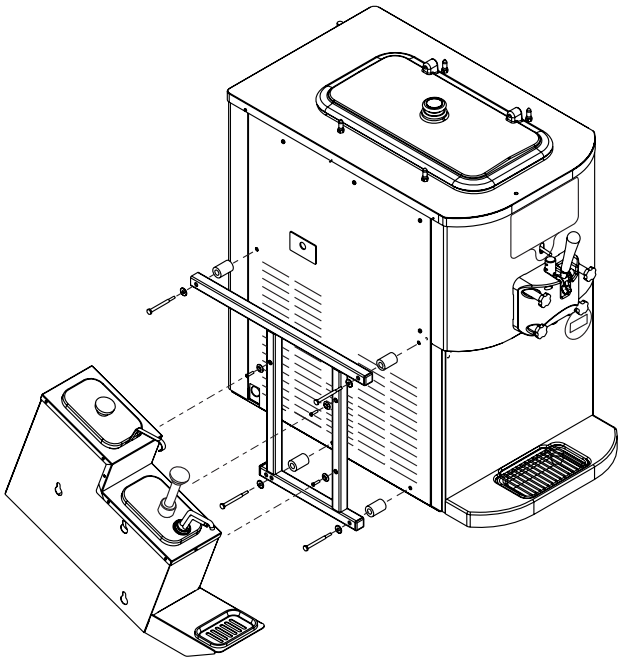


Figure 5

2. Install the Mounting Assembly – Syrup Rail (X57317) using the (4) Spacers (053600) and the (4) Screws-1/4-20X3 HEX CAP (025984) with (4) Washers (000655).

3. Install the (4) Plugs – Square Tubing (057381) in the ends of the Mounting Assembly – Syrup Rail (X57317).

4. Install the (3) Holding Collars (046551) using the (3) Screws-10-32X3/4 OVAL HD-SS.

5. Hang the Syrup Rail Assembly (048015-27) on the holding collars.

Perform the following steps to mount the syrup rail on the side of a unit where a top air discharge chute is installed:

1. Three holes must be created in the side of the chute as shown in Figure 6. (See the Syrup Rail Instruction 048014-DRW included with the Syrup Rail Kit.)

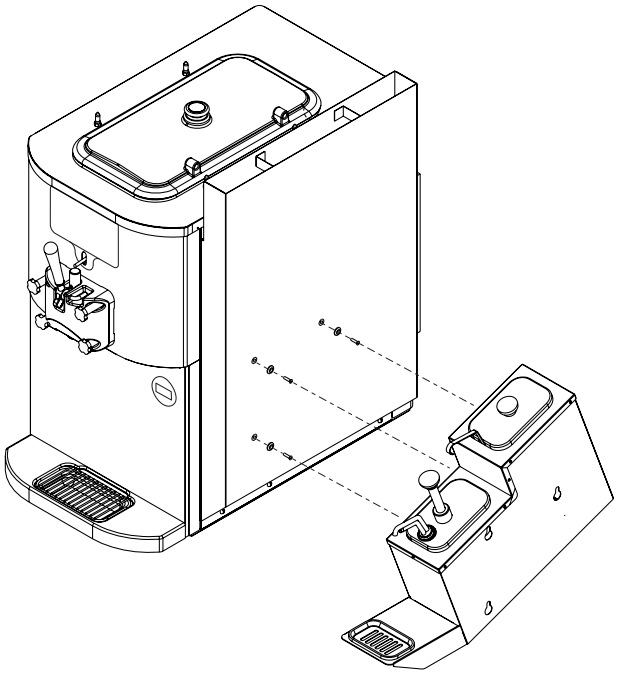


Figure 6

2. Install the (3) Nutserts (021106) in the panel.
3. Install the (3) Holding Collars (046551) using the (3) Screws-10-32X3/4 OVAL HD-SS.
4. Hang the Syrup Rail Assembly (048015-27) on the holding collars.

Syrup Rail Operating Instructions

1. Remove the stainless steel syrup jar with topping pump from the syrup rail. Check the water level in the well. Make sure the water is filled to the indicating mark on the inside wall (16 oz [454 g]). Check the water level daily.
2. Place the heater switch in the ON position. The heating process will take approximately 1-1/4 hours.
3. Prepare a pail with an approved 100 PPM sanitizing solution. USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.
4. Sanitize the pump by placing the entire assembly in the solution and pump the solution through the pump until sanitized.
5. Fill the heated and room temperature syrup jars with toppings. Place the topping pump in the heated syrup jar. Sanitize the ladle and place it in the room temperature jar.

Running Specifications

Pressures/Temperatures

The following are the Taylor recommended settings for various components within these models. The freezers in this manual use refrigerant R404A.

Note: These settings apply to both sides of the C716 and C717.

EPR Valve = 60 psi (414 kPa)

DBV Valve = 10 - 11 psi (69 - 76 kPa)

OPR Valve = 40 psi (276 kPa)

Expansion Valve (AXV)

Air Cooled - 21 psi (145 kPa)
Water Cooled - 21 psi (145 kPa)
for a normal product of 16° to 18°F (-8.8° to -7.7°C).

Expansion Valve Adjustment (AXV)

Place your gauge on the access valve on the suction line (located at the compressor).

Adjust higher or lower by turning the adjustment screw. Clockwise turns raise the pressure and counterclockwise lower the pressure.

Note: Make expansion valve adjustments with mix in the cylinder and the freezer in the AUTO mode. Be sure to allow adequate time for the pressure to stabilize.

Low Side (Suction)

Suction pressure equals expansion valve setting.

High Side (Discharge)

High side pressure varies for air cooled units, depending on the ambient temperature.

Ambient Temperature		Normal Operating Head Pressures
F	**C**	**PSI**
70°	21.1°	240 - 270 (1,655 - 1,862 kPa)
80°	26.7°	270 - 300 (1,862 - 2,069 kPa)
90°	32.2°	300 - 340 (2,069 - 2,344 kPa)
100°	37.8°	340 - 380 (2,344 - 2,620 kPa)

Water Valve

On a water cooled unit, the water valve should be set to maintain a compressor head pressure of 255 PSI (1,758 kPa).

Water Valve Adjustment

Place your gauge on the high side access port of the compressor. Turning the adjustment stem on the water valve clockwise will lower the pressure.

Note: Make this adjustment with mix in the cylinder and the freezer in the AUTO mode. Be sure to allow adequate time for pressure to stabilize.

Important to the Operator

C716/C717

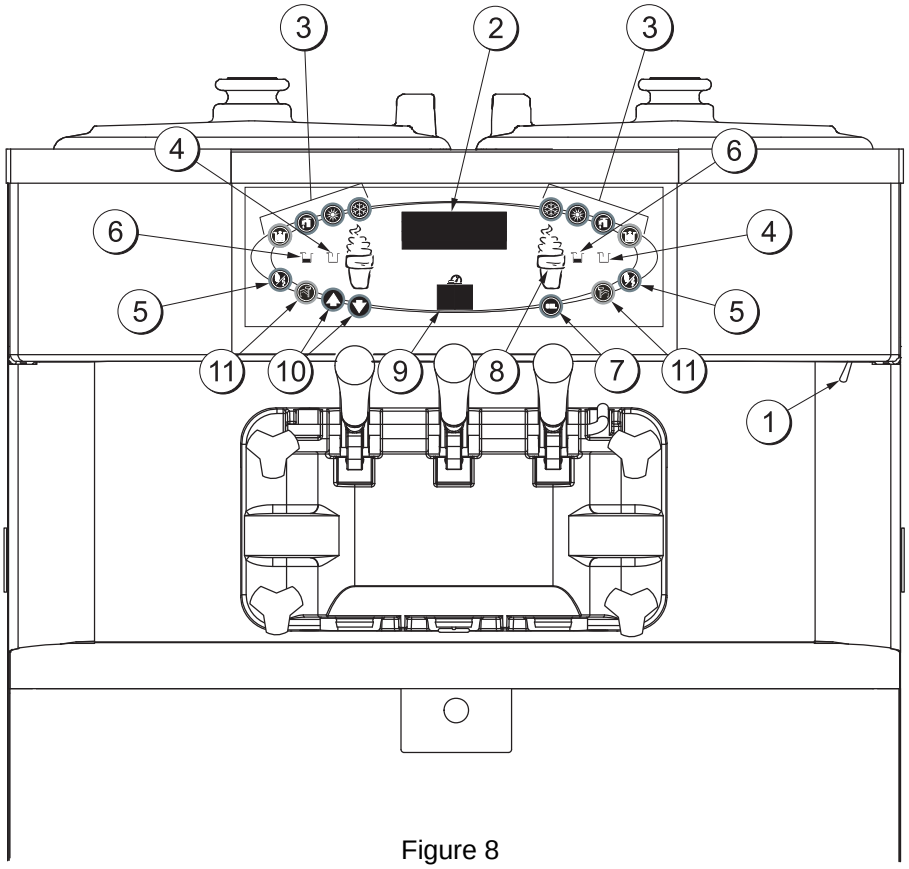


Figure 8

C708/C709

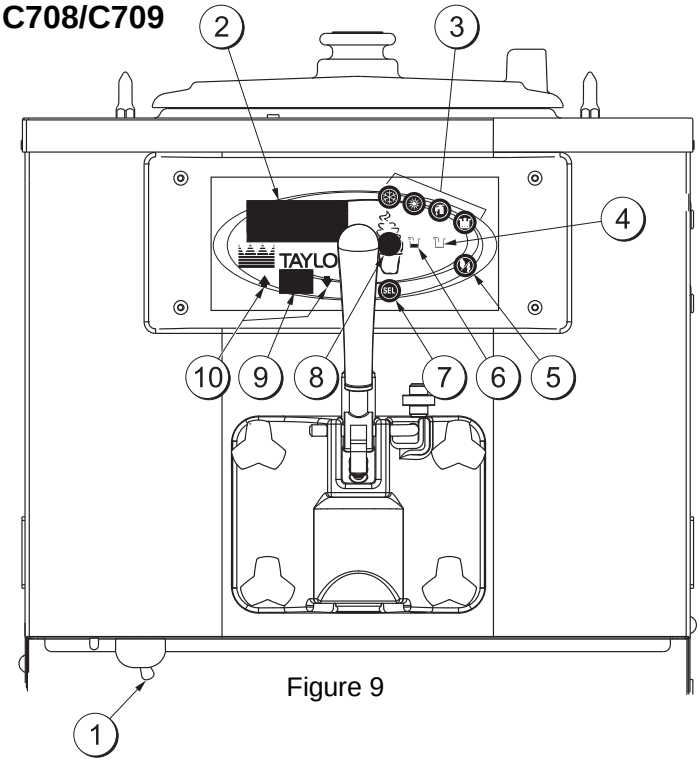


Figure 9

ITEM	DESCRIPTION
1	POWER SWITCH
2	VACUUM FLUORESCENT DISPLAY
3	KEYPADS
4	MIX OUT INDICATOR
5	STANDBY INDICATOR
6	MIX LOW INDICATOR
7	SELECT KEY
8	SERVICE MENU KEY
9	BRUSH CLEAN COUNTER
10	ARROW KEYS
11	SYRUP HEATER KEY

NOTE: MODELS C709 & C717 DO NOT HAVE MIX PUMP KEYS.

C708/C709

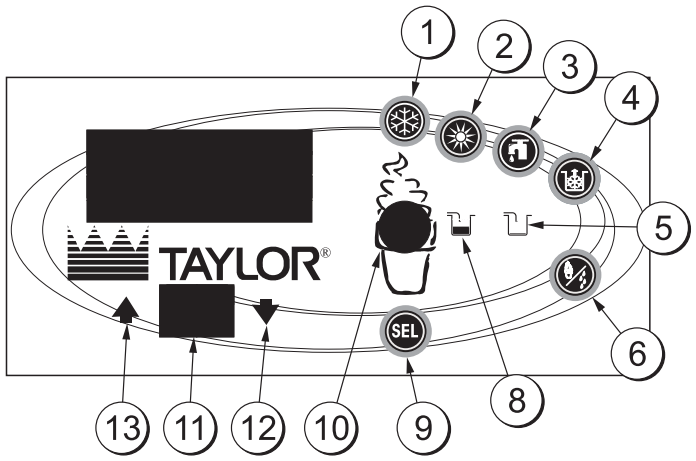


Figure 10

C716/C717

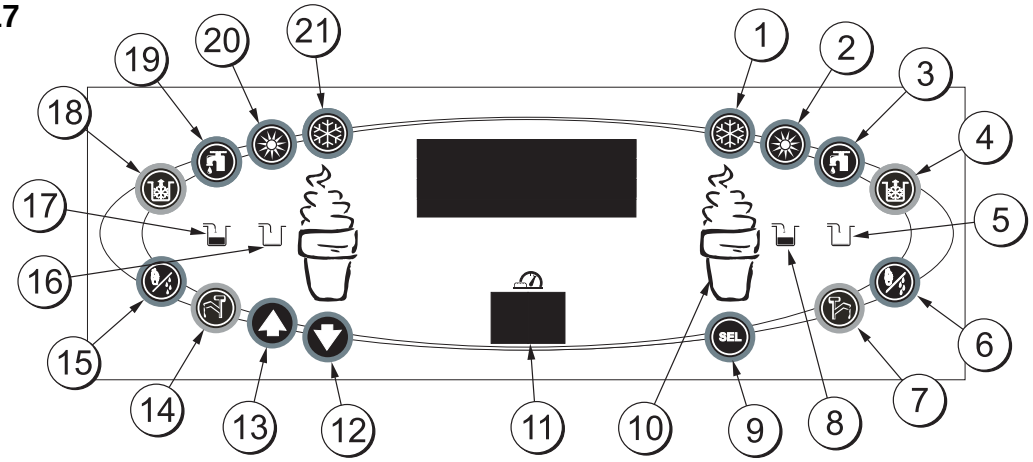


Figure 11

Symbol Definitions

To better communicate in the International arena, symbols have replaced words on many of our operator switches, function, and fault indicators. Your Taylor equipment is designed with these International symbols.

ITEM	DESCRIPTION
1	AUTO
2	HEAT CYCLE
3	WASH
4	MIX PUMP (C708/C716 ONLY)
5	MIX OUT
6	STANDBY
7	HEATER-RIGHT SIDE (C716/C717 ONLY)
8	MIX LOW
9	SELECT
10	MENU DISPLAY
11	BRUSH CLEAN COUNTER

ITEM	DESCRIPTION
12	DOWN ARROW
13	UP ARROW
*14	HEATER
*15	STANDBY
*16	MIX OUT
*17	MIX LOW
*18	MIX PUMP
*19	WASH
*20	HEAT CYCLE
*21	AUTO

*LEFT SIDE OF C716/C717 ONLY

Power Switch

When placed in the ON position, the power switch allows control panel operation.

Fluorescent Display

The fluorescent display is located on the front control panel. During normal operation the display is blank. The display is used to show menu options and notifies the operator if a fault is detected. On International models, the display will indicate the temperature of the mix in each hopper.

Indicator Lights

MIX LOW - When the MIX LOW symbol is illuminated, the mix hopper has a low supply of mix and should be refilled as soon as possible.

MIX OUT - When the MIX OUT symbol is illuminated, the mix hopper has been almost completely exhausted and has an insufficient supply of mix to operate the freezer. At this time, the AUTO mode is locked out and the freezer will be placed in the STANDBY mode. To initiate the refrigeration system, add mix to the mix hopper and touch the AUTO symbol. The freezer will automatically begin operation.

HEAT MODE - When the HEAT MODE symbol is illuminated, the freezer is in the process of a heat cycle.

BRUSH CLEAN COUNTER - When the BRUSH CLEAN COUNTER display has counted down to “1”, the machine must be disassembled and brush cleaned within 24 hours.

Adjustable Draw Handle

This unit features an adjustable draw handle(s) to provide the best portion control, giving a better, consistent quality to your product and controlling food costs. The draw handle should be adjusted to provide a flow rate of 5 to 7-1/2 oz (142 to 213 g) of product by weight per 10 seconds. To INCREASE the flow rate, turn the screw CLOCKWISE, and COUNTERCLOCKWISE to DECREASE the flow rate. (See Figure 12.)

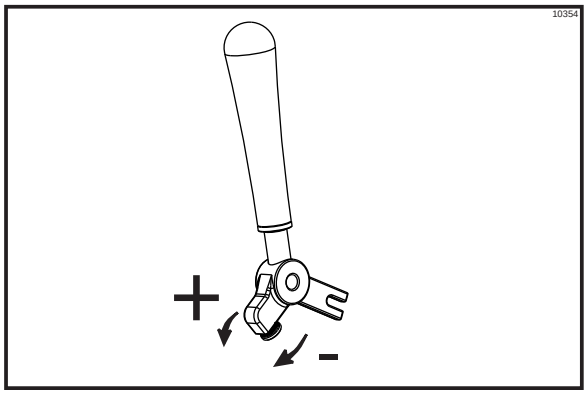


Figure 12

Beater Motor Overload

C708/C709: The beater motor overload is located in the service panel on the left side.
C716/C717: The beater motor overloads are located in the rear panel.

The overload protects the beater motor from an overload condition. Should an overload occur, the reset mechanism will trip. To properly reset the freezer, place the power switch in the OFF position. Press the reset button firmly. Turn the power switch to the ON position. Touch the WASH symbol and observe the freezer's performance.

WARNING: Do not use metal objects to press the reset button. Failure to comply may result in severe personal injury or death from electrical shock.

If the beater motor is turning properly, touch the WASH symbol to cancel the cycle. Touch the AUTO symbol to resume normal operation. If the freezer shuts down again, contact your authorized service technician.

Air/Mix Pump Reset Mechanism (C708 & C716 Only)

C708: The reset button for the pump is located on the left side.
C716: The reset buttons for the pumps are located in the rear panel.

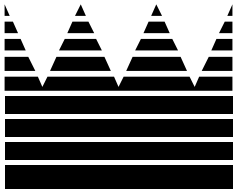
The reset protects the pump from an overload condition. Should an overload occur, the reset mechanism will trip. To reset the pump, press the reset button firmly.

 **WARNING: Do not use metal objects to press the reset button.** Failure to comply may result in severe personal injury or death.

Condenser Fan Motor

The condenser fan motor is driven by the software. The L1 to the fan is connected to the interface board at J6-6. The condenser fan is programmed to run any time the compressor is on and to stay running for 30 seconds after the compressor cycles off. The fan motor runs constantly through heat cycles regardless of the compressor status, then cycles off 30 seconds after the compressor cycles off at the end of the Heat Cycle and subsequent Standby Mode.

Notes:



Section 2:

Controls, Systems and Operations

- **Universal Control Programming**
- **Heat Treatment Cycle**
- **Heat Treatment Graph**
- **Freezer Lock-out**
- **Power Interrupt**
- **Pump Operation**
- **Timers**
- **Jumper Pins - UVC3**
- **Beater Stir Cycles**
- **Setting Viscosity**
- **Control Overview**
- **Refrigeration System - Hot Gas Treatment**
- **Checking and Setting Refrigeration Valves**
- **Refrigeration Schematic**
- **Refrigeration System Components**

Operating Screen Descriptions

The fluorescent display located in the center of the control panel is normally blank during the daily operation of the machine. The display is activated when the SEL symbol or the Manager's Menu is selected. The display screen will also alert the operator of specific faults detected by the control.

Note: The displays illustrated in this section are those seen on the Models C708/C709. The Model C716/C717 versions may vary slightly.

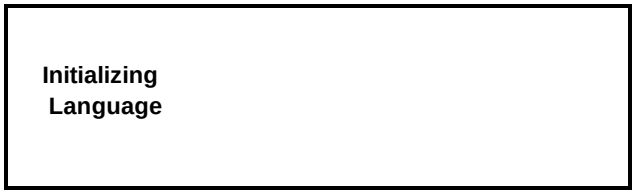
Power Up Memory (Initializing)

The seven segment display should display “00” during the initializing sequence.

When the machine is powered, the control system will initialize to perform a system check. The screen will display “INITIALIZING”. There will be four types of data the system will check: LANGUAGE, SYSTEM DATA, CONFIG DATA, and LOCKOUT DATA.

Language Initialization

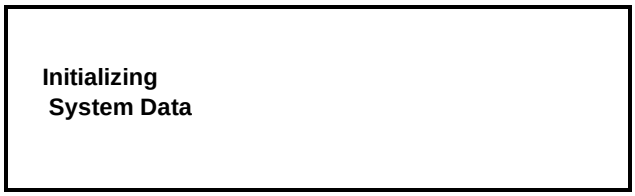
The UVC platform supports multiple languages by keeping specific strings in battery backed RAM. After power-up or a CPU reset, the strings are tested to see if the language strings are present and not corrupted. If the strings are present and not corrupted, initialization continues. Otherwise, the operator is prompted to select a language. While language strings are being checked for integrity, the following screen is displayed.



Note: If there is a language initialization fault, the machine will force a language selection prior to the initializing sequence. The standard menu LED's should light, as if it were in a menu. If a language has been selected, the unit is powered down, the machine should not ask for a language unless there is another language initialization fault. English is the factory default setting.

System Data

System data is protected separately from the rest of the data in memory. System data includes variables that change frequently such as the mode the machine is in, lockout status, serving counters, fault codes, and others. While System Data is being checked the following screen is displayed.



If the System Data is corrupted, the machine is set to OFF, the serving counters are set to zero, and the faults are cleared. A “SYSTEM CRC ERR” fault is set and displayed on the VFD. An acknowledgement (SEL key) is required.

Configuration Data

Configuration data is separate from the rest of the data in the memory. Configuration data is information entered through operator and service menus. While Configuration Data is being checked the following screen is displayed.

If Configuration data is corrupted, all user and service settings are set to defaults. A “CONFIG CRC ERR” fault is set and displayed on the VFD. The system will continue to operate in its previous mode but according to default settings.

Lockout Data

Lockout data is protected separately from the rest of the data in the memory. While the Lockout Data is being checked, the following screen is displayed.

Initializing
Lockout Data

If Lockout Data is corrupted, all lockout history data is cleared. A “LOCKOUT CRC ERR” fault is displayed.

After the memory integrity has been tested, the Safety Timeout screen will be displayed.

Heat Cycle Data

Heat cycle data is checked separately from the rest of the data in memory. Each individual Heat Cycle Data record is monitored for corruption individually. At the start of a heat cycle, the next Heat Cycle data record is cleared and data for the heat cycle is written to it. The current Heat Cycle Data is displayed as the first heat cycle record in the HEAT CYCLE DATA menu option.

The heat cycle data records are checked for integrity when the record is accessed, presently only through the HEAT CYCLE DATA menu option. **(For additional Heat Cycle Data information, see page 27.)**

Once the system has initialized, the number of days until brush cleaning is required is indicated on the control panel. The SAFETY TIMEOUT screen will be displayed with the alarm on for 60 seconds or until any control symbol is touched.

SAFETY TIMEOUT
ANY KEY ABORTS

Power Switch OFF

After the safety timeout has been completed and the power switch is OFF, the following screen is displayed.

POWER SWITCH OFF
- = - = - = - = -
UNIT CLEANED

Power Switch ON

When the power switch is placed in the ON position, the control panel touch keys become operative. The fluorescent display will be either blank or indicate that the unit has been cleaned.

UNIT CLEANED

Heat Cycle

The HEAT symbol on the control panel is illuminated throughout the heat treatment cycle. Two warning messages will be displayed on the screen. “DO NOT DRAW” will be displayed when the mix temperature is below 130°F (54.4°C).

DO NOT DRAW

When the temperature of the mix is above 130°F (54.4°C) the screen will display a message indicating that HOT PRODUCT is in the machine.

HOT PRODUCT

DO NOT attempt to draw product or disassemble the unit during the HEAT cycle. The product is hot and under extreme pressure.

In the HEAT cycle, the mix temperature in the hopper and freezing cylinder must be raised to 151°F (66.1°C) within 90 minutes.

When the heating phase is complete, the freezer goes into the holding phase of the cycle. The holding phase will keep the temperature above 151°F (66.1°C) for a minimum of 35 minutes.

The final phase of the heat treatment cycle is the cooling phase. The freezer must cool the mix below 41°F (5°C) within 90 minutes.

When the entire heat cycle has been completed, the HEAT symbol will no longer be illuminated. The machine will enter the STANDBY mode (STANDBY symbol illuminates). The machine can be placed in AUTO or left in STANDBY.

International Models Only:

Some International models will continuously display the temperature of the mix hopper when the power switch is in the ON position.

HOPPER 21.0 **UNIT CLEANED**

If the control is set for international configuration, the following screen will appear when the heat symbol is touched.

ARE YOU SURE **> Yes** **No**

Use the up or down arrow symbol to move the cursor to “YES”. Touch the SEL symbol to immediately start a heat cycle.

Note: The machine must be in AUTO or STANDBY and have sufficient mix in the hopper before the machine can successfully enter the HEAT mode of operation.

Manager's Menu

The Manager's Menu is used to enter the operator function displays. To access the Menu, touch the center of the CONE symbol on the control panel. The arrow symbols, the SEL symbol and the CONE symbol will be lit when the ACCESS CODE screen is displayed.

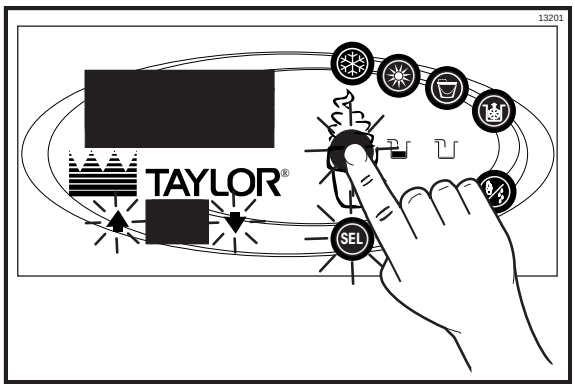


Figure 13

In the Menu program, the arrow symbols and the SEL symbol will function as menu keys.

- **UP ARROW -** increases the value above the cursor and is used to scroll upward in text displays.
- **DOWN ARROW -** decreases the value above the cursor and is used to scroll downward in text displays.
- **SEL -** advances the cursor position to the right and is used to select menu options.

There is a two minute time-out in effect during the Manager's Menu. While in the Manager's Menu, if no activity occurs within a two minute period, the display will exit to the Main Menu. There is one exception to this time-out, and that is the Current Conditions Display.

Note: The machine will continue operation in the mode it was in when the Menu was selected. However, the control keys will not be lit and are non–functional when the Manager's Menu is displayed. The control keys are functional in the Manager's Menu when the CURRENT CONDITIONS screen is displayed. (See CURRENT CONDITIONS on page 28.)

Entering Access Code

With the ACCESS CODE screen on the display, use the SEL symbol to set the first code number in the cursor position. When the correct number is selected, touch the SEL symbol to move the cursor to the next number position.

ENTER ACCESS CODE

8 3 0 9

Continue to enter the proper access code numbers (8309) until all four numbers are displayed, then touch the SEL symbol. The Manager's Menu list will display on the screen, provided the correct access code is entered.

If an incorrect number is entered for the access code, the display will exit the Menu program when the SEL symbol is touched.

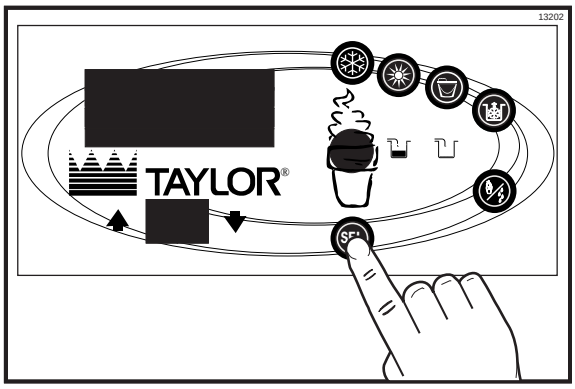


Figure 14

Manager Menu Options

Touch the ARROW symbols to move up or down through the Menu. Select a Menu option by touching the SEL symbol. Exit the Menu program by selecting EXIT FROM MENU or touch the CONE symbol.

The following menu options are listed in the Manager's Menu.

EXIT FROM MENU
RESET DRAW COUNTER
SET CLOCK
AUTO HEAT TIME
AUTO START TIME
STANDBY MODE
BRUSH CLEAN CYCLE (**Note:** This menu can only be accessed from the Service Menu for C708 and C709.)
MIX LEVEL AUDIBLE
LOCKOUT HISTORY
HEAT CYCLE SUMMARY
HEAT CYCLE DATA
SYSTEM INFORMATION
CURRENT CONDITIONS

Exit From Menu

Selecting “EXIT FROM MENU” will exit the Manager's Menu and the return the control panel symbols to normal operation.

Reset Draw Counter

The SERVING COUNTER screen is used to check or reset the number of servings dispensed from the machine. The SERVING COUNTER will automatically reset to zero when the machine is brush cleaned.

```
SERVINGS COUNTER

0
> Next
```

Reset the SERVING COUNTER by touching the SEL symbol to advance to the next screen. Touch the UP arrow symbol to move the arrow (>) to YES and touch the SEL symbol. The servings counter will reset to zero and exit back to the Manager's Menu.

```
RESET DRAW COUNTER

  Yes
> No
```

Set Clock

The SET CLOCK option allows the Manager to adjust the control clock date and time. The date and time may only be changed after the freezer has been manually cleaned but before it has been placed in the AUTO or STANDBY mode. The following message will be displayed if the SET CLOCK option is selected when the machine is not in a brush clean state.

```
SET CLOCK
12:01        2/21/2004
          NO CHANGES ALLOWED
Press Any Key
```

To change the date or time, select the SET CLOCK option in the menu. Touch the UP arrow symbol to advance the arrow from Exit to Change, then touch the SEL symbol to select the Change option.

```
SET CLOCK
12:01        2/21/2004
  Change
> Exit
```

Change the time by touching the UP arrow with the cursor under the hour position. Move the cursor to the minutes position by touching the SEL symbol. Once the correct minutes are entered, touch the SEL symbol to advance the cursor to the month.

```
SET CLOCK
12:01        2/21/2004

> Exit
```

Enter the correct month, day, and year. Then touch the SEL symbol to advance to the DAYLIGHT SAVING TIME screen.

```
DAYLIGHT SAVING TIME
      ENABLED
>  Enable
   Disable
```

To disable the Daylight Saving Time feature, touch the DOWN arrow to move the arrow to “Disable”. Then touch the SEL symbol to save the new setting.

The Daylight Saving feature, when enabled, will automatically adjust the control clock for daylight saving time.

On the models C716 and C717, Daylight Saving Time has been made programmable. If Daylight Saving Time should not start on the first Sunday in April and end on the last Sunday in October, touch the UP arrow symbol to advance the arrow from “Exit” to “Change”. Touch the SEL symbol to select the Change option and move to the next screen.

```
APR FIRST SUNDAY
OCT LAST SUNDAY
>  Change
   Exit
```

Use the arrow symbols to scroll to the appropriate month. Touch the SEL symbol to accept the selection.

```
DST START MONTH
   JAN
   FEB
>  MAR
```

Once the appropriate month has been entered, scroll to the appropriate week. Touch the SEL symbol to accept the selection. (**Note:** Scroll down to see selections “FOURTH SUNDAY” and “LAST SUNDAY”.)

```
DST START WEEK
   FIRST SUNDAY
>  SECOND SUNDAY
   THIRD SUNDAY
```

Scroll to the month that Daylight Saving Time will end. Touch the SEL symbol to accept the selection.

```
DST END MONTH
   OCT
>  NOV
   DEC
```

Scroll to the appropriate week that Daylight Saving Time will end. Touch the SEL symbol to accept the selection.

```
DST END WEEK
>  FIRST SUNDAY
   SECOND SUNDAY
   THIRD SUNDAY
```

Touch the SEL symbol to exit the screen and return to the Menu.

Auto Heat Time

The AUTO HEAT TIME screen allows the Manager to set the time of day in which the heat treatment cycle will start.

```
          AUTO HEAT TIME
               00:00
   Change
>  Exit
```

To set the AUTO HEAT TIME, touch the UP arrow symbol to move the arrow to “Change”. Then touch the SEL symbol. The screen will display the time with the cursor under the hour position.

```
          AUTO HEAT TIME
               00:00
```

Touch the arrow symbols to increase or decrease the hour to the desired setting. Then move the cursor to the minutes position by touching the SEL symbol. Adjust the setting for minutes. Then touch the SEL symbol to save the setting and return to the AUTO HEAT TIME screen. Touch the SEL symbol to exit the screen and return to the Menu.

Auto Start Time

The AUTO START TIME option allows the Manager to set the time of day at which the machine automatically enters the AUTO mode from the STANDBY mode. The machine must be in the STANDBY mode without a freezer lock condition in order to AUTO start at the programmable time. The AUTO START TIME can also be Disabled and require starting the AUTO mode manually.

```
          AUTO START TIME
             DISABLED
   Enable
>  Disable
```

Enable the AUTO START TIME by touching the UP arrow symbol to move the arrow up to “Enable”. Touch the SEL symbol to advance to the next screen.

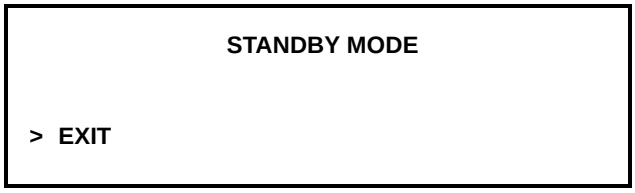
Program the AUTO START TIME by touching the UP arrow symbol to move the arrow to “Change”. Touch the SEL symbol to advance to the next screen.

Use the arrow symbols to program the AUTO START TIME by increasing or decreasing the hour setting above the cursor. Touch the SEL symbol to advance the cursor and program the minutes setting. Touch the SEL symbol to return to the previous screen with the new time setting displayed. Touch the SEL symbol to exit the screen and return to the Menu.

Standby Mode

The STANDBY option is used to manually place the machine in the standby mode during long, no draw periods. Select the STANDBY screen from the Manager's Menu. Touch the SEL symbol to activate Standby. Standby may also be entered by touching the STANDBY key when not in the Manager's Menu.

Discontinue Standby operation by exiting the Manager's Menu and select the AUTO mode.

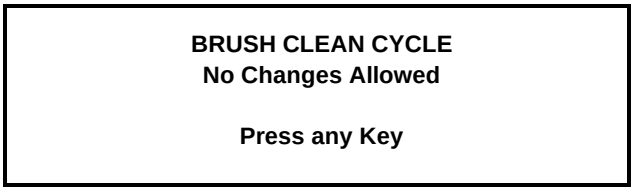


Brush Clean Cycle

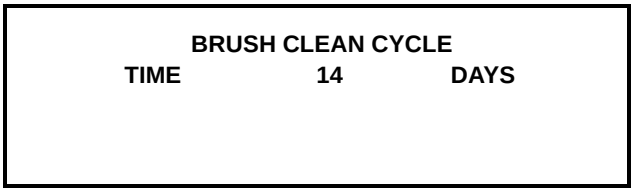
The BRUSH CLEAN CYCLE option allows the Manager to select the maximum number of days between brush cleaning the machine. The brush clean cycle may only be changed after the freezer has been manually cleaned but before it has been placed in the AUTO or STANDBY mode.

Note: On the C708 and C709, the Brush Clean Cycle option can only be accessed through the Service Menu.

The following message will be displayed if the BRUSH CLEAN CYCLE option is selected when the machine is not in a brush clean state.



Change the number of days between brush clean intervals by using the arrow symbols. Touch the SEL symbol to save the setting and exit back to the Menu. The number of days displayed on the brush clean counter will change to the new setting.



Always comply with local guidelines on the number of days allowed between brush clean cycles.

Mix Level Audible

The MIX LEVEL AUDIBLE option, when enabled, will alert the operator with an audible tone when there is Mix Low or Mix Out condition. The following screen is displayed upon selecting this option.

MIX LEVEL AUDIBLE

> Enable
Disable

Disable the audible tone feature by touching the DOWN arrow symbol to move the arrow to "Disable". Touch the SEL symbol to save the new setting and return to the Menu. The control panel icons for Mix Low and Mix Out will illuminate as the mix level drops in the hopper, but the audible tone will be disabled.

Lockout History

The LOCKOUT HISTORY screen displays a history of the last 100 soft locks, hard locks, brush clean dates, or aborted heat cycles. Page numbers are indicated in the upper right hand corner. Page 1 always contains the most recent failure.

LOCKOUT HISTORY **1**
00/00/00 **00:00**
Reason
> Exit

The second line of the screen displays the date and time a failure occurs. The third line indicates the reason for a failure, or will indicate if a successful brush cleaning has occurred. Some failures occur with multiple reasons. When this occurs, a page will be generated for each reason.

Use the arrow symbols to advance forward or move backward to view each screen. Listed below are the variable messages that may appear.

Faults Occurring Entering a Heat Treatment Cycle

POWER SWITCH OFF - The power switch is OFF.

AUTO OR STBY OFF - The control was not in the AUTO or STANDBY mode.

MIX OUT FAILURE - A Mix Out condition was present.

NO HEAT CYCLE TRIED - The Auto Heat Time was set to attempt a heat cycle more than 24 hours after the last successful heat cycle.

Faults Occurring While in Heat Mode

HEAT MODE FAILURE - The maximum allowable heat mode time exceeded 90 minutes.

COOL MODE FAILURE - The maximum allowable cool mode time exceeded 90 minutes.

TOTAL TIME FAILURE - The maximum allowable total heat treatment time exceeded 4 hours.

BRUSH CLEAN TIMEOUT - The total days in operation exceeded the brush clean cycle setting.

POWER SWITCH OFF - The power switch was turned OFF during the heat cycle.

POWER FAIL IN H/C - A power failure occurred during the heat treatment cycle.

MIX LOW FAILURE - The mix level in the hopper is too low for a successful heat cycle.

BEATER OVLD H/C - The overload tripped for the beater motor.

BRL THERM FAIL - The thermistor sensor for the freezing cylinder failed.

HOPPER THERM FAIL - The thermistor sensor for the hopper failed.

HPCO H/C - The high pressure switch opened during the heat treatment cycle.

Faults Occurring While in AUTO Mode

(L/R) HPR>41F (5C) AFTER 4 HR - The mix temperature in the hopper was above 41°F (5°C) more than four hours.

(L/R) BRL>41F (5C) AFTER 4 HR - The mix temperature in the freezing cylinder (barrel) was above 41°F (5°C) more than four hours.

(L/R) HPR>41F (5C) AFTER PF - The mix temperature in the hopper was above 41°F (5°C) more than four hours following a power failure.

(L/R) BRL>41F (5C) AFTER PF - The mix temperature in the freezing cylinder (barrel) was above 41°F (5°C) more than four hours following a power failure.

(L/R) HPR>45F (7C) AFTER 1 HR - The mix temperature in the left or right hopper was above 45°F (7°C) more than one hour.

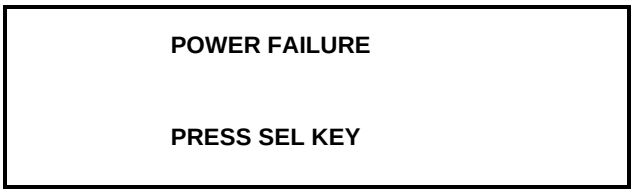
(L/R) BRL>45F (7C) AFTER 1 HR - The mix temperature in the left or right freezing cylinder (barrel) was above 45°F (7°C) more than one hour.

(L/R) HPR>59F (15C) - The mix temperature in the hopper exceeded 59°F (15°C).

(L/R) BRL>59F (15C) - The mix temperature in the freezing cylinder (barrel) exceeded 59°F (15°C).

Error Messages

Error messages are faults that cannot be monitored after they are detected. An example would be if a CRC error occurs. The software corrects it and then reports it to the operator. Once the error is reported, it stops monitoring it. The following are a list of these errors.



POWER FAILURE
RESET TO DEFAULTS
CONFIG CRC ERROR
LOCKOUT CRC ERROR
HC DATA CRC ERROR
SYSTEM CRC ERROR
EEPROM CRC ERROR
CORRUPTED LANGUAGE
HOPPER OVER TEMP
BARREL OVER TEMP
PRODUCT DOOR OFF
LANGUAGE TOO SHORT
MISSING LANGUAGE

These errors will be shown on the top line of the display. The fourth line will show “PRESS SEL KEY”. When the SEL key is pressed, the error displayed will be cleared. If other errors exist, the sequence will be repeated.

Heat Cycle Summary

The HEAT CYCLE SUMMARY screen displays the hours since the last heat cycle, the hours since the product temperature was above 150°F (65.6°C), and the number of heat cycles completed since the last brush clean date.

HEAT CYCLE SUMMARY	
HRS SINCE HC	0
HRS SINCE 150	0
HC SINCE BC	0

Heat Cycle Data

The HEAT CYCLE DATA screen contains a record of up to 366 heat treatment cycles. The most recent heat cycle data will be shown first.

Each heat cycle record has three screens. The first screen displays the month and day of the heat cycle, the start time and end time, and the fault description. The bottom line displays the record number and indicates if a power failure occurred during the heat cycle (POWER FAILURE IN HC).

	HEAT TREAT CYCLE	
01/01	02:00	05:14
	NO FAULT FOUND	
		1

Touch the UP arrow symbol to advance forward through the data pages. Touch the DOWN arrow symbol to reverse the page direction.

Hopper and barrel temperature records for each side of the freezer are displayed in the second and third screens. The second screen shows the left side (L) side of the freezer.

The third screen shows the right side (R) of the freezer.

The top line of these screens shows the hopper (H) and barrel (B) temperatures recorded at the end of the Heat Treat Cycle and indicates the side (L or R) of the freezer.

The remaining lines indicate the following:

HEAT = Total time for the hopper (h) and barrel (b) to reach 150.9°F (66.1°C).

OVER = Total time the hopper (h) and barrel (b) temperature was above 150°F (65.6°C).

COOL = Total time the hopper (h) and barrel (b) temperature was above 41°F (5°C) during the COOL phase.

PEAK = Highest temperature reading for the hopper (h) and barrel (b) during the Heat Treatment Cycle.

H: 40.9		B:26.3		L
HEAT	OVER		COOL	PEAK
1:12	0:49	h	1:19	161.0
0:46	1:11	b	0:15	169.7

H: 38.0		B:23.7		R
HEAT	OVER		COOL	PEAK
1:09	0:52	h	1:11	161.2
0:66	1:00	b	0:11	169.9

The HEAT time indicates the amount of time taken in each zone to reach 150.9°F (66.1°C). Each zone must remain above 150°F (65.6°C) for a minimum of 35 minutes.

Touch the UP arrow symbol to advance to the next page or the DOWN arrow symbol to view the previous page. A Heat Cycle Failure message will display on the first screen if a failure occurred.

Listed below are variable failure code messages which could appear on line 2.

HT HEAT TIME FAILURE
Mix temperature did not rise above 151°F (66.1°C) in less than 90 minutes.

CL COOL MODE FAILURE
Mix temperature in the hopper and freezing cylinder did not fall below 41°F (5°C) in less than 90 minutes.

TT TOTAL TIME FAILURE
The heat treatment cycle must be completed in no more than 4 hours.

ML MIX LOW FAILURE
The Heat Phase or Cool Phase time was exceeded and a mix low condition was present.

MO MIX OUT FAILURE
A mix out condition was detected at the start or during the heat cycle.

BO BEATER OLVD IN HC
A beater overload occurred during the heat cycle.

HO HPCO IN HEAT CYCLE
A high pressure cut-out condition occurred during the heat cycle.

PF POWER FAILURE IN HC
A power failure caused the Heat Phase, Cool Phase, or Total Cycle Time to exceed the maximum allowed time. If a power failure occurs, but the heat treatment cycle does not fail, an asterisk(*) will appear on the third line of the display.

OP OPERATOR INTERRUPT
Indicates the heat cycle was aborted in the OPERATOR INTERRUPT option in the Service Menu.

PS POWER SWITCH OFF
The power switch was placed into the OFF position during the heat cycle.

TH THERMISTOR FAILURE
A thermistor probe has failed.

PD PRODUCT DOOR OFF
A product door is not in place or is loose.

System Information

The SYSTEM INFORMATION is displayed on three separate screens. The first screen contains the control and software version installed in the machine.

SOFTWARE VERSION
C708 CONTROL UVC3
VERSION X.XX
> Next

Touch the SEL symbol to advance to the next system information screen containing the software language version.

Language
V2.00 English 621

> Next

Touch the SEL symbol to advance to the third system information screen containing the model bill of material and machine serial number. Touching the SEL symbol again will return to the Menu list.

B.O.M. C70827C000
S/N K0000000

> Next

Current Conditions

The CURRENT CONDITIONS screen provides the viscosity readings for the product when the machine is running, and the hopper and the freezing cylinder temperatures for the machine.

VISC 0.0
HOPPER 41.0

CURRENT CONDITIONS is the only Menu screen that will return the control panel keys to normal operation. The Menu symbols will not be lit when this option is selected but the panel touch keys are fully functional. Exit the CURRENT CONDITIONS screen and return to the Menu by touching the SEL symbol.

Service Menu

The Service Menu option allows trained service technicians to access and modify critical operating parameters for the machine. The access code for the service menu is: **5 2 3 1**.

Service Menu Options

The Service Menu screen includes the following options which are also displayed in the Manager Menu. (See page 20.)

EXIT FROM MENU
RESET DRAW COUNTER
SET CLOCK
AUTO HEAT TIME
AUTO START TIME
STANDBY MODE
BRUSH CLEAN CYCLE - (C716 & C717)
(Access through Service Menu for C708 & C709)
MIX LEVEL AUDIBLE
LOCKOUT HISTORY
HEAT CYCLE SUMMARY
HEAT CYCLE DATA
SYSTEM INFORMATION
CURRENT CONDITIONS

The Service Menu screen also includes the following options which can only be accessed through the Service Menu:

TEMPERATURE SCALE
STANDBY TEMP
HOPPER TEMP
HEAT TREAT TEMPS
VISCOSITY SETTING
BARREL PRIORITY
COMPRESSOR CYCLE TIME
COMPRESSOR ON DELAY
BEATER OFF DELAY
MIX PUMP OFF DELAY
EDIT UNIT ID
SELECT LANGUAGE
ABORT HEAT CYCLE
MANUAL CONTROL
RESET TO DEFAULTS

Temperature Scale

This option allows the service technician to choose the scale in which the machine will display all temperatures.

TEMPERATURE SCALE
FAHRENHEIT
>FAHRENHEIT
CELSIUS

Pressing the UP key moves the arrow to Fahrenheit. Pressing the DOWN key will move the arrow to Celsius. Pressing the SEL symbol with the arrow next to the appropriate option will select this option and return to the Service Menu screen.

Standby Temp

This option allows the technician to adjust the freezing cylinder temperature at which the compressor will turn on in STANDBY. The Standby Temp screen is displayed upon selecting this option.

STANDBY TEMP
CUT IN AT : 39.0
CURRENT : 39.0
> Next

Standby temperatures must be set to maintain hopper and freezing cylinder temperatures below 40°F (4.4°C). With the hot gas system, it is not necessary to set this temperature at 30.5°F (-8.3°C) as was done on the glycol systems. The recommended temperature is 39°F (3.9°C).

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

The temperature differential is 4°F (2°C) for Standby temperature.

Hopper Temp

This option allows the technician to adjust the hopper temperature in AUTO and STANDBY. The Hopper Temp Cooling screen is displayed upon selecting this option.

```
HOPPER TEMP COOLING
CUT IN AT     :          39.0
CURRENT       :          39.0
> Next
```

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen. The temperature differential is 2°F (1°C) for the hopper temperature.

Heat Treat Temps

This option allows the technician to adjust the barrel (freezing cylinder) and hopper temperatures used to control the Hot Gas Solenoid in the HEAT and HOLD phases of the Heat Cycle. The Barrel Heating screen is displayed first.

```
BARREL HEAT TEMP
HEATING       :          160.0
CURRENT       :          41.0
> Next
```

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and displays the Barrel Holding screen.

```
BARREL HOLD TEMP
HEATING       :          160.0
CURRENT       :          41.0
> Next
```

The factory default setting for barrel heating is 160°F (71°C).

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and displays the Hopper Heating screen. The factory default setting for hopper heating is 155°F (68°C).

```
HOPPER HEAT TEMP
HEATING       :          155.0
CURRENT       :          41.0
> Next
```

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and displays the Hopper Holding screen. The factory default setting for hopper hold is 155°F (68°C).

```
HOPPER HOLD TEMP
HEATING       :          155.0
CURRENT       :          41.0
> Next
```

Pressing the UP or DOWN keys increase and decrease the temperature. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen. Pressing the MENU symbol with any screen showing ignores any changes and returns to the Service Menu screen.

Viscosity Setting

This option allows the service technician to adjust the viscosity at which the compressor turns off in AUTO. The first screen is displayed upon entering this function.

```
VISCOSITY SETTING
VISC          =          2.8 AMPS
  Change
> Exit
```

Pressing the UP key moves the arrow to Change. Pressing the DOWN key moves the arrow to “Exit”. Pressing the SEL symbol with the arrow next to “Exit” has no effect, and returns to the Service Menu screen. Pressing the SEL symbol with the arrow next to “Change” displays the second screen.

```
VISCOSITY SETTING
VISC          =          2.8 AMPS
  Current     =          0.0
```

Pressing the UP key increases the viscosity setting by 0.1 amp. Pressing the DOWN key decreases the viscosity setting by 0.1 amp. Pressing the SEL symbol accepts the viscosity setting and returns to the Service Menu screen.

Barrel Priority (C716/C717 Only)

This option allows the technician to set barrel priority. The factory default setting has this feature disabled. The following screen is displayed upon entering this option.

```
BARREL PRIORITY DISABLED

   Enable
> Disable
```

If barrel priority is selected, the hopper will not cool until the barrel set-point is reached. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

Comp Cycle Time

This option allows the technician to set the Compressor Cycle Time. The following screen is displayed upon entering this option.

```
COMP CYCLE TIME
 CYCLE TIME   :          10 MIN
```

Pressing the UP or DOWN key increases or decreases the cycle time by one minute respectively. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

Comp On Delay

This option allows the technician to adjust the Compressor On Delay. The following screen is displayed upon entering this option.

```
COMP ON DELAY
TIME   :          2  SECONDS
```

Pressing the UP or DOWN key increases or decreases the time delay by one second respectively. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

Note: The minimum setting for Comp On Delay is 2 seconds.

Beater Off Delay

This option allows the technician to set the time the beater motor continues to run after the compressor has cycled off. The following screen is displayed upon entering this option.

```
BEATER OFF DELAY
TIME   :          0  SECONDS
```

Pressing the UP or DOWN key increases or decreases the time DELAY by one second respectively. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

Mix Pump Off Delay (C708 & C716 Only)

This option allows the technician to set the amount of time that the mix pump runs after the draw valve has closed (switch opened). The following screen is displayed upon entering this option.

```
MIX PUMP OFF DELAY
  RUN TIME    :                10 SEC

              + + +   - - -      SEL
```

Pressing the UP or DOWN key increases or decreases the time DELAY by one second respectively. Pressing the SEL symbol accepts the setting and returns to the Service Menu screen.

Edit Unit ID

This option allows the technician to enter the factory Bill of Materials (BOM) code used to assemble the freezer, the freezer Serial Number, and the Store ID number. The Freezer BOM screen is displayed first.

```
ENTER FREEZER BOM
C 7 0 8 3 3 C 0 0 0
-
```

Pressing the SEL symbol scrolls the cursor to the right one place for each symbol press. Pressing the UP or DOWN key increase or decrease respectively, with rollover, the selected digits. Once the correct freezer BOM has been entered, pressing the SEL symbol displays the Serial Number screen.

```
ENTER FREEZER SN
K 0 0 0 0 0 0 0
-
```

Repeat the operation as described previously. Once the correct freezer Serial Number has been entered, pressing the SEL symbol displays the Store ID screen.

```
ENTER STORE ID
 0 0 0 0 0
_
```

Repeat the operation as described previously. Once the correct Store ID has been entered, pressing the SEL symbol returns to the Service Menu screen.

Select Language

This option allows the technician to select one of seven languages available. The following screen will be displayed upon selecting this option.

```
> ENGLISH
  ESPANOL
  DANSK
  FRANCAIS
```

Pressing the UP and DOWN keys moves the arrow to the selection. Pressing the SEL symbol with the arrow next to one of the seven choices selects that choice and returns to the Service Menu screen. If no language is selected, the factory default is English.

Abort Heat Cycle

This option allows the technician to abort a Heat Cycle. The following screen will be displayed upon selecting this option **if the machine is in a Heat Cycle**.

```
  ABORT HEAT CYCLE

   Yes
> No
```

Pressing the UP key moves the arrow to “Yes”. Pressing the DOWN key moves the arrow to “No”. Pressing the SEL symbol with the arrow next to “Yes” will abort the Heat Cycle. Pressing the SEL symbol with the arrow next to “No” has no effect and will return to the Service Menu screen.

Manual Control

This option allows the technician to start and stop key components to test their performance. When selected manually, power will be supplied to each component until the technician selects “OFF” or exits the screen. The technician must manually select “OFF” or exit the menu.

> EXIT
L BEATER MOTOR
L COMPRESSOR
L MIX PUMP
L SUCTION VALVE
L BRL LIQ VALVE
L HPR LIQ VALVE
L BRL HEAT VALVE
L HPR HEAT VALVE
L AGITATOR
L SYRUP HEATER
R BEATER MOTOR
R COMPRESSOR
R MIX PUMP
R SUCTION VALVE
R BRL LIQ VALVE
R HPR LIQ VALVE
R BRL HEAT VALVE
R HPR HEAT VALVE
R AGITATOR
R SYRUP HEATER
FAN

The freezer must be in the OFF mode to use this feature.

MANUAL CONTROL
ERROR MACHINE MUST
BE IN (OFF) MODE
PRESS SEL KEY

Press SELECT to enter the manual control option.

MANUAL CONTROL
L BEATER MOTOR
> START
EXIT

Pressing SELECT with the arrow on START will send voltage to the component selected.

MANUAL CONTROL
L BEATER MOTOR
> OFF
EXIT

Pressing SELECT with the arrow on OFF will turn the component off. Moving the arrow to EXIT will turn the component off and exit this menu option.

Reset to Defaults

The Reset to Defaults option will allow the service technician to clear all RAM memory. This screen was added because it will not be possible to remove the RAM chip on future iterations of the UVC3 control. The machine must be in a “Unit Cleaned” status in order to restore the default settings. Selecting this option in the menu will display a screen asking “ARE YOU SURE?” (See Figure 15.)

RESET TO DEFAULT
ARE YOU SURE?
> YES
NO

Figure 15

Moving the cursor to YES and selecting the Calibration key will restore all factory default values.

Heat Treatment Cycle

The function of the Heat Treatment Cycle is to raise the temperature of the mix in the freezing cylinder and hopper high enough and quickly enough to destroy bacteria. When this has been accomplished, the temperatures must then be returned to a temperature low enough and quickly enough to retard spoilage.

The Heat Treatment Cycle must be successfully completed at least once every 24 hours or the freezer will automatically lock itself in the STANDBY mode.

The Heat Treatment Cycle may be started automatically according to the AUTO HEAT CYCLE TIME.

IMPORTANT: The freezer must be operating in either the STANDBY or AUTO mode before a Heat Treatment Cycle can be started.

There are three phases in a Heat Treatment Cycle: Heat, Hold and Cool

The Heat Phase

During this phase, the temperatures of the product in the freezing cylinder and hopper are raised over 150°F (65°C) in 90 minutes or less.

The Heat Phase Timer “times out” the maximum allowable amount of time the unit can remain in the HEAT phase of the Heat Treatment Cycle. If the timer exceeds 90 minutes, the unit will lock-out.

The Hold Phase

During the HOLD phase, the temperature of the product is “held” over 150°F (65°C) for a minimum of 35 minutes to ensure the destruction of all harmful bacteria in the product.

The Hold Phase Timer “times out” after 35 minutes as long as all freezing cylinder and hopper temperatures remain above 150°F (65°C) for the duration of the HOLD phase.

The Cool Phase

During the COOL phase, the product in the freezing cylinder and the hopper are lowered to 41°F (5°C) or less. The unit must complete this phase in less than 90 minutes.

The COOL Phase Timer measures the maximum allowable time the unit can remain in the COOL phase. If the timer exceeds 90 minutes, the unit will lock-out.

The Heat Cycle TT (Total Time) Timer “times out” the maximum allowable time the unit can remain in the Heat Treatment Cycle (4 hours). If the timer exceeds four hours, the unit will lock out. This timer is a combination of the HEAT, HOLD, and COOL Phase Times.

When the entire Heat Treatment Cycle has been completed, the normal display will appear, indicating that the machine is operating in the STANDBY mode.

Heat Treatment Graph

The purpose of the HEAT phase is to raise the product temperature above 150°F (65°C) within 90 minutes. To satisfy the control system, the product must actually reach 160°F (71°C) in the freezing cylinder and 155°F (68°C) in the hopper. This requirement ensures that the 150°F (65°C) requirement has been met. Health laws require these parameters to be 150°F (65°C) in 90 minutes; however, the actual amount of time the freezer takes to accomplish this requirement is closer to 60 minutes.

While in the COOL phase, the hopper and freezing cylinder are operated by Standby temperatures of:

Freezing Cylinder:	30.5°F (-.83°C) and above “ON” 26.5°F (-3.1°C) “OFF”
Hopper:	39°F (3.9°C) and above “ON” 37°F (2.8°C) “OFF”

The COOL Phase concludes when the hopper and freezing cylinder reach 41°F (5°C). At this point the machine enters Standby operation. While the time given for the COOL Phase is 90 minutes, the actual time is closer to 30 minutes.

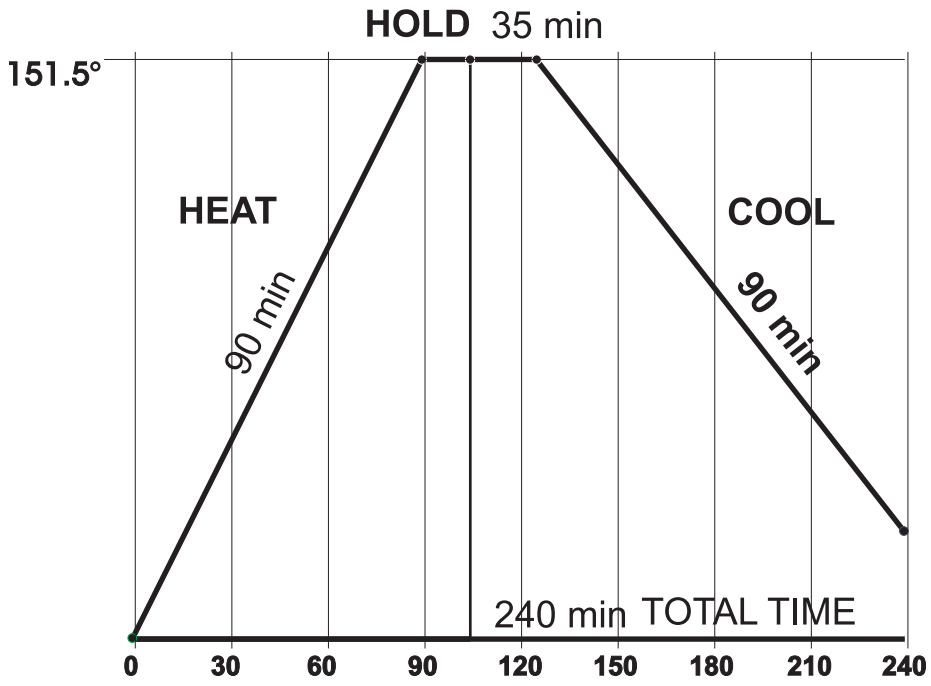


Figure 16

Freezer Lock-Out

To comply with health codes, heat treatment system freezers **must** complete a heat treatment cycle daily, and **must** be disassembled and brush cleaned a minimum of every 14 days. Brush cleaning is the normal disassembly and cleaning procedure found in the Operator Manual. Failure to follow these guidelines will cause the control to lock the freezer out of the AUTO mode.

If the Heat Treatment Cycle fails, the screen will display a failure message and return the freezer to the STANDBY mode.

Always comply with local guidelines for the maximum number of days allowed between brush clean cycles. (See the Manager's Menu for setting the Brush Clean interval.)

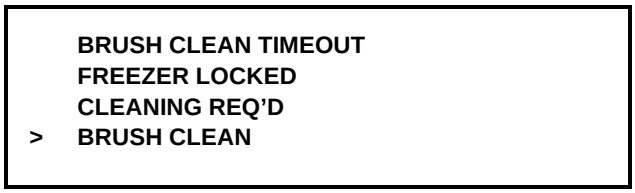
There are two types of freezer lock conditions that can occur: Hard Lock or Soft Lock. A Hard Lock requires the machine be disassembled and brush cleaned. A Soft Lock can be corrected by either disassembling and brush cleaning the machine, or by starting another heat treatment cycle.

Hardlock

There are two causes of a hard lock failure. The freezer will hardlock if either the Brush Clean Timer has elapsed or if a Thermistor Failure (Freezing Cylinder or Hopper) occurred during a Heat cycle.

Brush Clean Timeout

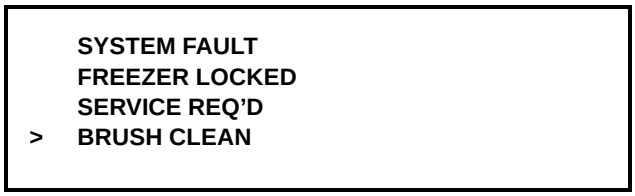
The following screen will be displayed if a Brush Clean Cycle Timeout has occurred.



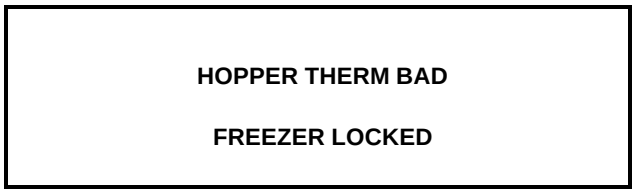
Touching the SEL symbol will display the following screen.

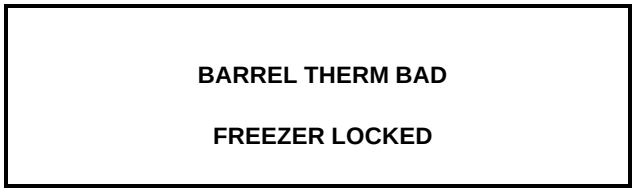
Thermistor Failure

The following screen will display if there has been a thermistor failure (freezing cylinder or hopper) during the heat treatment process.



Touching the SEL symbol will indicate which thermistor caused the Hard Lock.





Note: Three codes have been set up to assist in diagnosing bad thermistor probes. If a probe has shorted (resistance less than 1 ohm), "SHRT" will be displayed on the screen for its respective machine location. If the probe is open (resistance above 1 megohm), "OPEN" will be displayed. If the actual probe environment exceeds 200 °F (93°C), the respective screen display location will read "OVER" indicating the temperature is "out of range".

If the machine has hard locked and an attempt is made to enter AUTO, the machine will enter the STANDBY mode and display the following message.

FREEZER LOCKED

To restore the message that identified the reason for the hard lock, turn the power switch OFF for five seconds and then return the power switch to the ON position. The original message with the reason for the Hard Lock will be displayed.

The FREEZER LOCKED message will remain on the display until the brush clean requirements are fulfilled. The freezer must be disassembled in order to activate the five minute timer on the display screen. Once the timer counts down to zero, the lockout is cleared.

Soft Lock

If a heat treatment cycle has not been initiated within the last 24 hours, a soft lock failure will occur. A soft lock allows the operator to correct the cause of the soft lock. The operator has the option of either starting another heat cycle or brush cleaning the machine. When a soft lock occurs, the machine will go into the STANDBY mode. The following message is displayed on the screen. The reason for the soft lock is indicated on the second line.

NO HEAT CYCLE START
REASON
> HEAT CYCLE
BRUSH CLEAN

If the reason for the soft lock has been corrected, selecting HEAT CYCLE initiates a Heat Cycle immediately. Selecting BRUSH CLEAN when the previous message is displayed will hard lock the machine and brush cleaning will be necessary.

Following are the variable messages for soft lock failures that appear on the second line of the screen.

POWER SWITCH OFF	Power switch was in the OFF position.
MIX OUT PRESENT	There was a mix out condition present.
AUTO OR STANDBY OFF	The machine was not in the AUTO or STANDBY mode.
NO HEAT CYCLE TRIED	A heat treatment cycle was not attempted in the last 24 hours. (AUTO HEAT TIME was advanced or a power loss was experienced at the time the cycle was to occur.)

If the following screen appears, a soft lock has occurred during the heat treatment cycle.

HEAT TREAT FAILURE
FREEZER LOCKED
> HEAT CYCLE
BRUSH CLEAN

A soft lock can also occur any time during operation when the hopper or freezing cylinder temperature rises above 59°F (15°C), the temperature rises and remains above 45°F(7°C) for more than one hour, or the temperature rises and remains above 41°F(5°C) for more than four hours.

If a PRODUCT OVER TEMPERATURE condition occurs during operation, the following screen will appear.

PRODUCT OVER TEMP

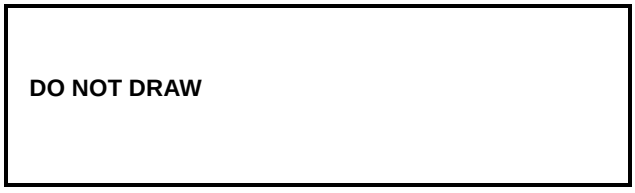
> HEAT CYCLE
BRUSH CLEAN

Additional faults which will result in a soft lock condition if they occur during a heat treatment cycle are listed below, along with an explanation of the corrective action.

- BEATER OVERLOAD - Place the power switch in the OFF position. Press the beater reset button firmly. Place the power switch in the ON position and restart in AUTO.
- HPCO COMPRESSOR - Place the power switch in the OFF position. Wait 5 minutes for the machine to cool. Place the power switch in the ON position and restart in AUTO.
- COMP ON TOO LONG - The compressor run time exceeded the 11 minute timer. Make sure the beater rotation is clockwise. Check the scraper blades and the refrigeration system.

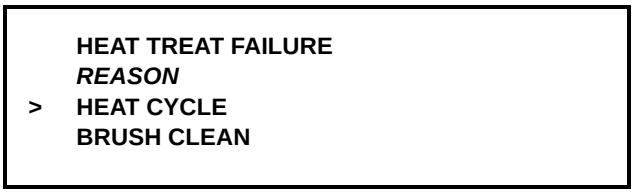
When a soft lock condition has occured, automatic freezer operation cannot take place until the freezer is disassembled and brush cleaned, or has completed a heat treatment cycle.

Once the freezer is unlocked by starting a heat treatment cycle, the HEAT symbol will illuminate and the following message will be displayed on the screen.



If BRUSH CLEAN is selected to clear the lockout by brush cleaning the machine, the FREEZER LOCKED message will remain on the display until the brush clean requirements are fulfilled. The freezer must be disassembled in order to activate the five minute timer on the display screen. Once the timer counts down to zero, the lockout is cleared.

To restore the message that identified the reason for the soft lock, turn the power switch OFF for five seconds, and then return the power switch to the ON position. The original message with the reason for the soft lock will be displayed.



A record of Heat Cycle Data and Lock Out History can be found in the Manager's Menu.

Power Interrupt

All operating modes and setpoints are stored in the battery backed memory. Having been in the AUTO, STANDBY, or any of the HEAT mode phases, recovery from a power failure will return the machine to its previous mode of operation after a Memory Initialization function has occurred. If a power failure has occurred, the Safety Time Out screen will display a “Power Failure” message on the first line and the audio alarm will be ON. This message must be cleared.

If the freezing cylinder or hopper temperature rise above 41°F (5°C) and stay above 41°F (5°C) for 4 hours, the machine will soft lock when power is restored. If the temperature rises above 59°F (15°C) the machine will lock immediately.

14 Day Brush Clean

In order for the control to recognize that the unit has been brush cleaned, the following criteria must be met.

1. The freezing cylinder and hopper temperatures must be above 60°F (16°C).
2. The mix out and mix low probes must not be satisfied.
3. The door must be removed.

Note: The power switch must be OFF to view the 5 minute countdown timer.

Note: The criteria in Steps 1 - 3 must be met simultaneously for 5 minutes. These criteria will be met when the unit is properly brush cleaned according to the Taylor Operator's Manual.

Completion of a successful brush clean resets the Brush Clean Cycle timer and removes the locked condition. A new brush clean date is calculated the first time that the Auto or Standby mode is entered.

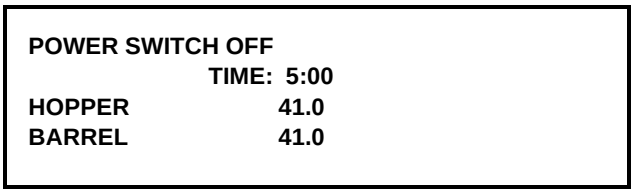
A screen showing the status of the elements required for a brush clean are displayed when the power switch is in the OFF position and the machine is not in a brush clean state.

Line 1: Indicates the power switch is OFF.

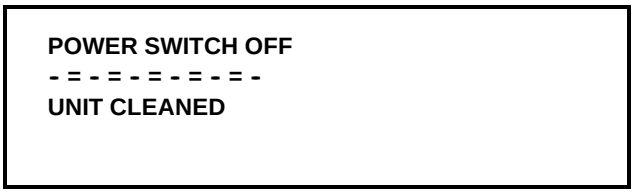
Line 2: Shows the time (in minutes and seconds) remaining for the system to enter a Brush Clean state.

Line 3: Shows the hopper temperature.

Line 4: Shows the barrel temperature.



If any of the requirements for a brush clean have not been met, the time displayed will remain at 5:00 minutes. When all the requirements for a brush cleaning are met, and the five minutes expire, the screen will change to the second screen, which is the standard power switch OFF screen.



When the power switch is placed in the ON position, the third line of the screen will display “Unit Cleaned”.

Pump Operation

The pump operates under the following conditions:

Pump Key

When the PUMP symbol is pressed, the pump is active by itself or with the WASH mode of operation.

Mix Pump

The mix pump will be active for 30 seconds whenever the AUTO mode is entered. If a mix out condition forces the machine into the STANDBY mode of operation, the mix pump will not be active.

Mix Pump Draw Timer

During the AUTO mode, the mix pump will operate for 5 - 30 seconds after every draw of product. The factory setting is 10 seconds.

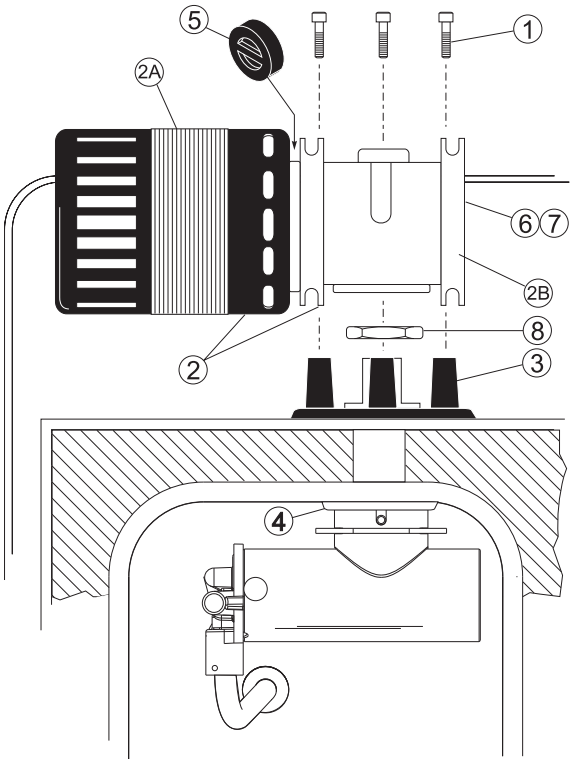


Figure 17

ITEM	DESCRIPTION	PART NO.
1	Screw-1/4-20 x 3/4	020128-2
2	Motor-Reducer (50/60 Soft Serve)	036955-34
2A	Motor (Soft Serve)	049246-34
2B	Gear (50/60 Hz Soft Serve)	049247-34
3	Mount-Motor	036934

ITEM	DESCRIPTION	PART NO.
4	Sleeve A.-Mix Pump	X44761
5	Coupling-Motor-Flexible	047936
6*	Seal-Input	048836
7*	Seal-Output	048837
8	Nut-Pump Sleeve	036933

*Not Shown

Timers

Two Minute Stir Cycle

If the machine is in the STANDBY mode, the beater motor will turn on for six seconds every two minutes when the Standby Temp setpoint 26.5°F (-4°C) is satisfied.

If the machine is in the HEAT mode, the beater motor continues the two minute stir cycle (see STANDBY above) until the freezing cylinder temperature rises above 120°F (49°C). Once this temperature is reached the beater motor runs continuously.

Mix Pump Timer

The mix pump will run for 30 seconds anytime the unit is placed in the AUTO mode, but not from STANDBY.

Mix Draw Timer

During the AUTO mode, the mix pump will run for 5 - 30 seconds every time product is drawn from the machine. The factory setting is 10 seconds.

24 Hour Last Heat Cycle Event

If the machine runs longer than 24 hours without a successful Heat Treatment Cycle, the machine will soft lock.

14 Day Timer

If the machine runs longer than 14 days without a successful brush cleaning, the machine will hard lock.

Heat Phase Timer

The Heat Phase Timer times out the maximum allowable time the unit can be in the Heat Phase of the Heat Treatment Cycle (90 minutes). If the timer exceeds 90 minutes, the unit will lock out.

Hold Phase Timer

This timer assures that product in the freezing cylinder and the hopper are held above 150°F (65°C) for a minimum of 35 *continuous* minutes.

Cool Phase Timer

The Cool Phase Timer times out the maximum allowable time the unit can remain in the COOL phase of the Heat Treatment Cycle (90 minutes). If the timer exceeds 90 minutes, the unit will soft lock.

Safety Timeout

Once power is applied to the unit, a 60 second timer places the unit in an “IDLE” state. The tone is turned on in 0.5 second intervals, and a “Safety Timeout” message appears on the LCD. This timer can be aborted by pressing any key.

Brush Clean Timer

This timer times out 5 minutes when all conditions for a successful brush cleaning are met.

Jumper Pins - UVC3

JUMPER		PINS	FUNCTION
JP1		Pins 1 & 2	Jumper installed – normal applications using refrigerated mix.
			No jumper installed – general market configuration using non–refrigerated mix. Ignores hopper temperature lockout parameters to allow adding non–refrigerated mix into the hopper.
		Pins 3 & 4	No jumper – Not used *(for future development)*
JP2	D/I	Pins 1 & 2	**Domestic configuration – jumper installed.** Hopper temperature not displayed on screen. Heat symbol symbols are only active when a lockout condition has occurred. Standby symbols are disabled.
			International configuration – no jumper. Hopper temperature is displayed on screen. Manual heat cycle starts by touching the HEAT symbol. Standby symbols are functional.
		Pins 3 & 4	No jumper – Not used *(for future development)*
JP3		Pins 1 & 2	Remove jumper to disable audible device located on UVC3 control.
		Pins 3 & 4	No jumper – Not used *(for future development)*

Note: The new UVC control board jumper blocks have 4 pins. Jumper on pins 1 & 2 are active. Pins 3 & 4 are open for future development.

As of February 7, 2007, the software has been modified to display the correct values for soft serve amps when the jumper on the personality board is placed in the “B” position. The “A” position should no longer be used.

Programming Jumpers

Interface Board

W5		If a jumper is present on the left interface board, the real time clock can be changed in any mode.
W4		Installing a jumper on the left or right interface board forces the liquid solenoid valves, the hot gas solenoid valves, and the suction solenoid to be energized on the corresponding side of the unit. Removing the jumper ends their operation. This is used for reclaiming and evacuation of the refrigeration system only, or manual cycling of the solenoid valves for service check.
W3		A jumper on the W3 of the left interface board enables the syrup heaters.
W2		If a jumper is present on the left interface board, it resets the brush clean date. C716/C717: If a jumper is present on the right interface board, it enables the 59°F (15°C) product temperature fault.
J10		C708/C709: If a jumper is present on J10, pins 1 & 2 of the interface board, it enables the 59°F (15°C) product temperature fault.

Beater Stir Cycles

Standby

When the unit is in the STANDBY mode, the stir cycle will be activated. The beater stir cycle timer counts down two minutes (in seconds) and then activates the beater motor for six seconds. After the stir cycle, the process will repeat itself; the timer will count down two minutes, and the beater will run for six seconds.

Hopper Temperature

The hopper temperature setpoint range is 37 - 39°F (2.8 - 3.9°C). In the AUTO or STANDBY mode the compressor starts when the hopper temperature is above the setpoint and stops when the hopper temperature reaches the setpoint -2°.

The hopper liquid solenoid opens when the hopper temperature rises above this setpoint and closes when the hopper temperature is below its setpoint -2°.

Setting Viscosity

Viscosity

Viscosity is the term used when referring to product appearance, temperature, thickness and firmness.

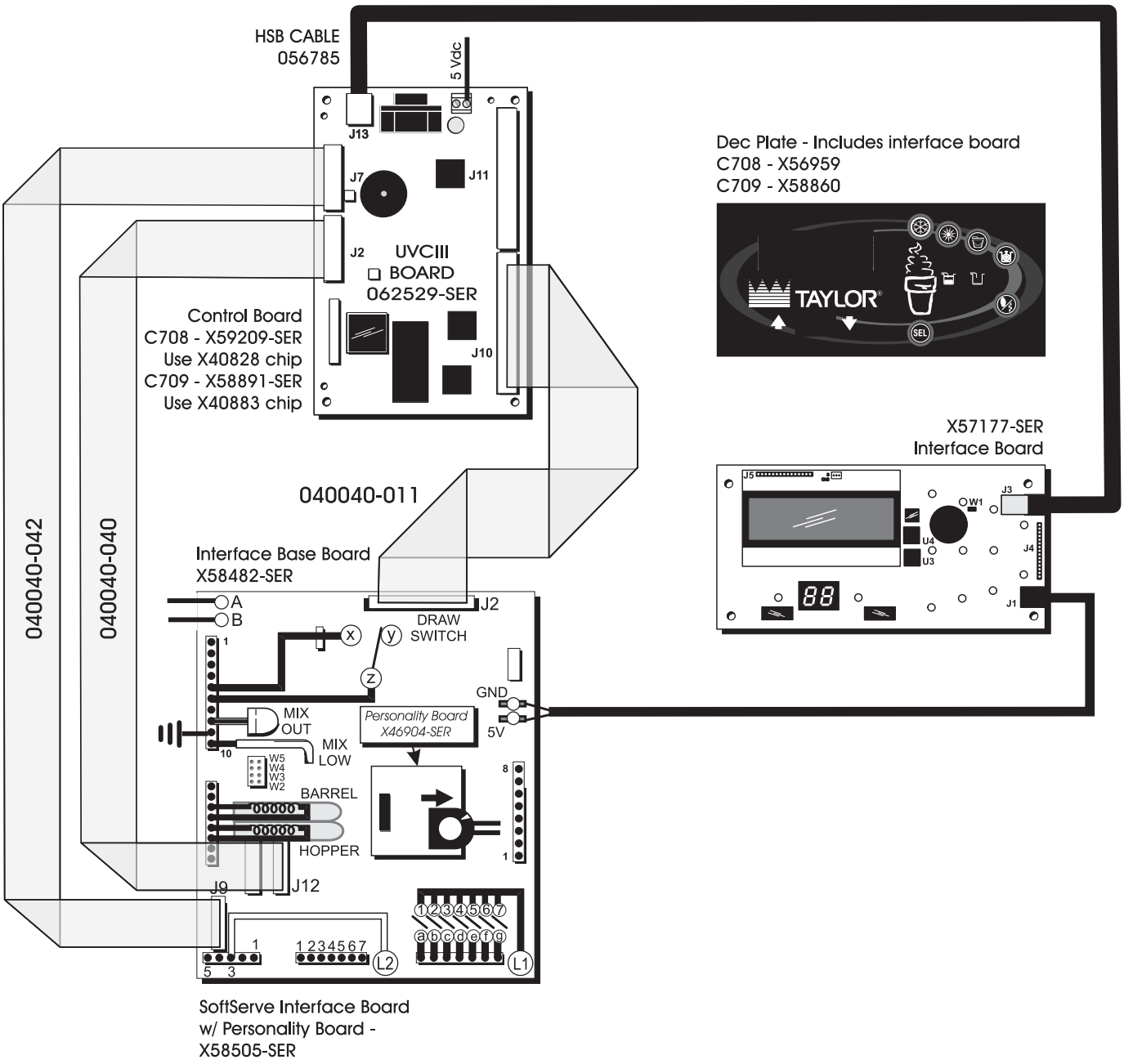
Soft serve viscosity is measured by monitoring the amperage load of the beater motor. The amperage load of the beater motor is low when the product in the freezing cylinder is liquid. As the product freezes (thickens), the amperage load increases. When the amperage load reaches the setpoint, the refrigeration cycle discontinues.

The factory setting (setpoint) for soft serve viscosity is 2.8 amps. The amperage measurement is determined by monitoring the L1 leg of power being delivered to the beater motor. To adjust the serving viscosity, it may be necessary to raise or lower the amperage setpoint. Adjust in increases of 0.1 amps.

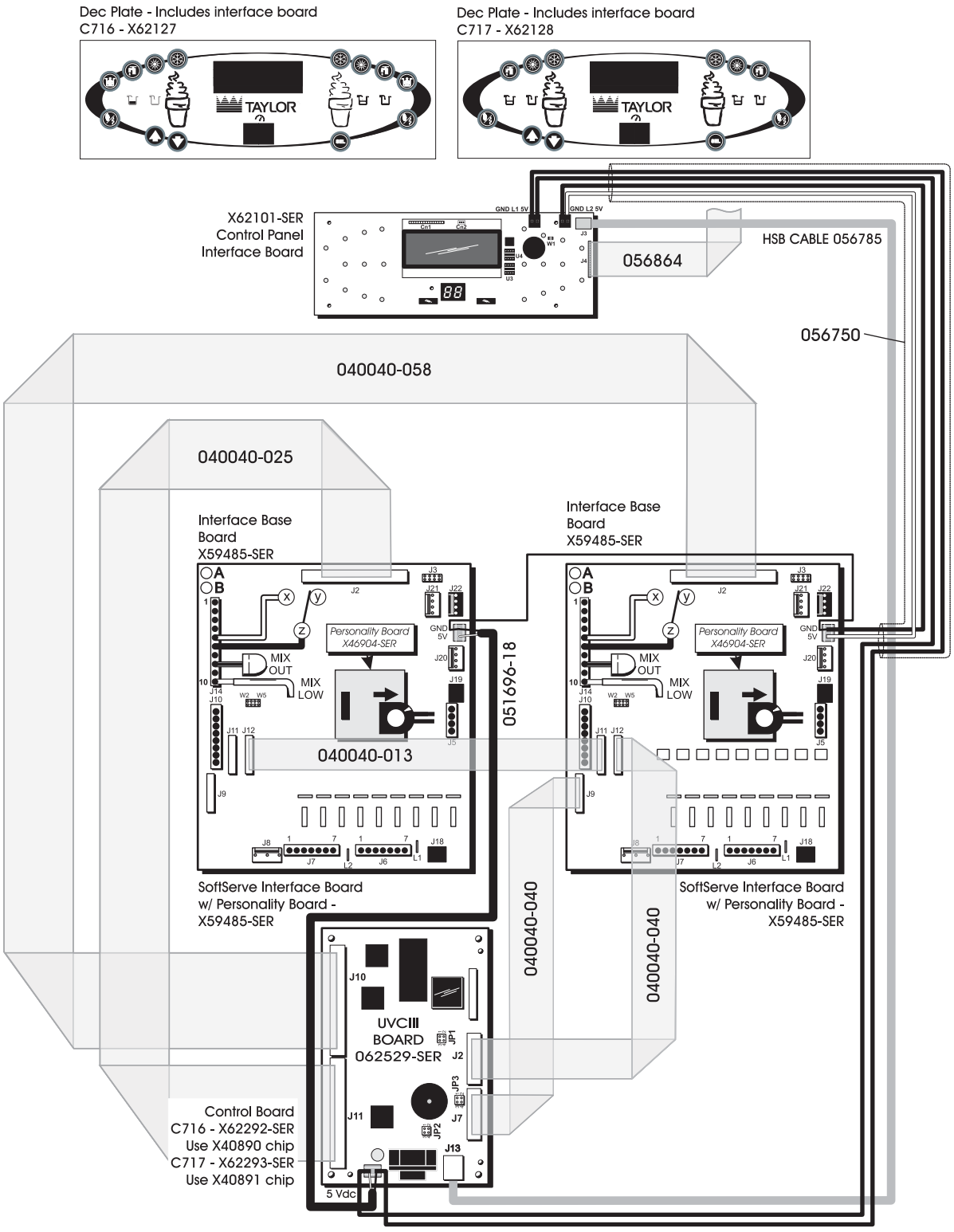
The serving temperature of soft serve product may vary throughout the day. The serving temperature may range from 16°F to 19°F (-8.8°C to -7.2°C).

VISCOSITY SETTING			
VISC	**=**	**2.8**	**AMPS**
CURRENT	**=**	**0.0**	

C708/C709 Control Overview



C716/C717 Control Overview



Refrigeration System - Hot Gas Treatment

The refrigeration system utilizes a main compressor that provides for heating and cooling of both the freezing cylinder and the hopper. An AXV expansion valve is used on the freezing cylinder to provide consistent product quality by maintaining the evaporating temperature at -15°F (-26°C).

A thermal expansion valve (TXV) is used on the hopper system for the Cool Phase. The TXV provides the required control of refrigerant mass flow to control refrigerant floodback to the compressor.

There is a provision for liquid refrigerant injection to the compressor suction to control excessive compressor discharge temperature during the Cool Phase. The bulb is located on the discharge line near the compressor to sense when the discharge temperature approaches 250°F (121°C). **Note:** The valve opens at 230°F (110°C).

There are two liquid line solenoid valves to provide control over the refrigeration to the hopper and freezing cylinder during the Cool Phase. Both liquid line solenoids are closed during the Hot Gas Heat Phase.

Two hot gas solenoid valves are used during the Heat Phase to direct the compressor discharge gas to the freezing cylinder and hopper, bypassing the condenser, freezing cylinder AXV and the hopper TXV.

When only the hopper is being cooled, a hot gas bypass valve is used to divert refrigerant gas to the suction line.

In order to maintain product temperature above 150°F (65.5°C) for 35 minutes during the Hold Phase, the compressor will cycle on and off.

The main system condenser is a 3-row 5/16” tube and raised lance fin condenser. The liquid line receiver helps control the variable amount of free refrigerant in the system. A filter dryer is provided. There is a liquid line - suction line heat exchanger on the main refrigeration system.

Note: This information applies to both sides on the C716 and C717 - independent systems.

Checking and Setting Refrigeration Valves

(Units Equipped With DBV Valves)

This machine is equipped with a safety door lock. Freezer operation is not allowed in the AUTO, STANDBY or WASH modes if the door is off. In order to perform a frost check or a beater rotation check, the technician must use a magnet to bypass the reed switch located behind the front panel.

Note: To check various pressures in the refrigeration system, the machine must be assembled and have product in both the hopper and the freezing cylinder.

Gauges should **not** be installed on these freezers unless a problem is suspected with the refrigeration system. Once you have determined there is a problem, perform the following procedures:

Step 1
Install refrigeration gauges on the service valves located behind the lower front panel. Remove the safety cover for complete access.

Step 2
Install a suction line gauge on the schrader valve fitting on the EPR valve. (See the refrigeration schematic.)

Step 3
Set the DBV valve (discharge bypass valve) by placing the freezer in STANDBY. When the freezing cylinder is satisfied and the **hopper only** is still cooling adjust the DBV valve to 10 - 11 psi (69 - 76 kPa) by reading the suction gauge at the service valves.

Step 4
Adjust the EPR valve to 60 psi (414 kPa) by reading the suction gauge on the EPR access fitting.

Note: It is easier to set these valves when the hopper is reaching the cycle off temperature of 37°F (2.8°C) vs. temperatures above 45° (7.2°C)].

Step 5
IMPORTANT! Recheck the pressure settings of the DBV and EPR valves. Readjust the valves, if necessary. (**Note:** Rechecking the valves is required because the adjustment of each valve affects the pressure of the other valve.)

Step 6
When the compressor has cycled off, place the unit in AUTO. Set the freezing cylinder expansion valve to 20 to 22 psi (138 to 145 kPa) and the water valve to 255 psi (1,758 kPa) if so equipped.

Step 7
Place the freezer into a heat cycle. The hopper only will heat for the first 10 minutes and then the freezing cylinder will begin to heat.

Step 8
Once the hopper is above 100°F (38°C), set the OPR valve to 40 psi (276 kPa) by reading the pressures at the service valves.

Failure to follow these procedures will result in improperly set valves and poor freezer performance.

To reclaim and recharge a system, install a jumper on W4 on the interface board to open all solenoids. Remove the jumper upon completion of the recharge and check valve settings as outlined above.

Note: Each side must be set individually on the C716 and C717.

Checking and Setting Refrigeration Valves

(Units Not Equipped With DBV Valves)

This machine is equipped with a safety door lock. Freezer operation is not allowed in the AUTO, STANDBY or WASH modes if the door is off. In order to perform a frost check or a beater rotation check, the technician must use a magnet to bypass the reed switch located behind the front panel.

Note: To check various pressures in the refrigeration system, the machine must be assembled and have product in both the hopper and the freezing cylinder.

Gauges should **not** be installed on these freezers unless a problem is suspected with the refrigeration system. Once you have determined there is a problem, perform the following procedures:

Step 1
Install refrigeration gauges on the service valves located behind the lower front panel. Remove the safety cover for complete access.

Step 2
Install a suction line gauge on the schrader valve fitting on the EPR valve. (See the refrigeration schematic.)

Step 3
Place the freezer in the STANDBY mode. When the freezing cylinder is satisfied and the **hopper only** is still cooling, adjust the EPR valve to 60 psi (414 kPa) by reading the suction gauge on the EPR access fitting.

Note: It is easier to set this valve when the hopper is reaching the cycle off temperature of 37°F (2.8°C) vs. temperatures above 45° (7.2°C)].

Step 4
When the compressor has cycled off, place the unit in AUTO. Set the freezing cylinder expansion valve to 20 to 22 psi (138 to 145 kPa) and the water valve to 255 psi (1,758 kPa) if so equipped.

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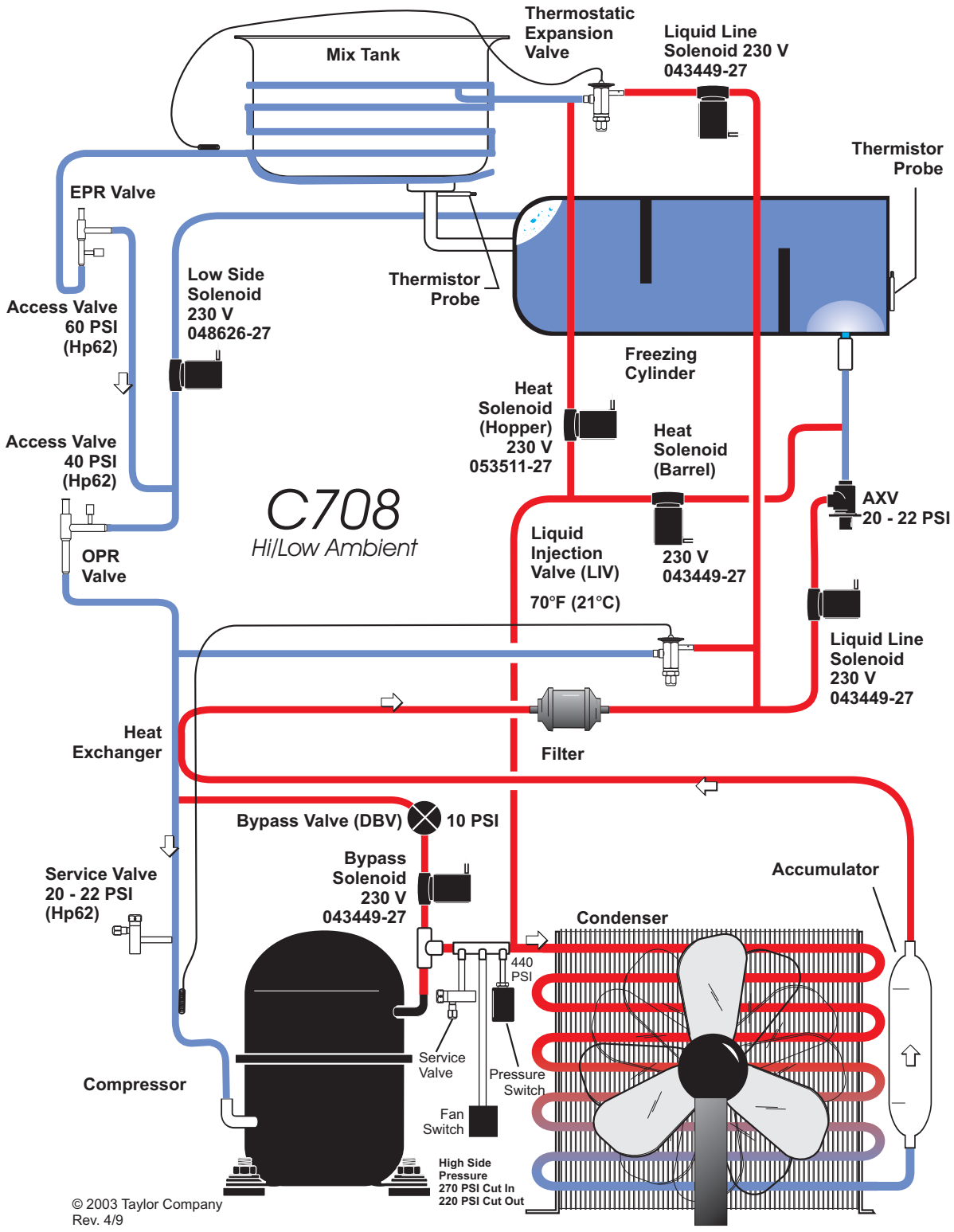
To reclaim and recharge a system, install a jumper on W4 on the interface board to open all solenoids. Remove the jumper upon completion of the recharge and check valve settings as outlined above.

Note: Each side must be set individually on the C716 and C717.

Refrigeration Schematic (Units Equipped With DBV Valves)



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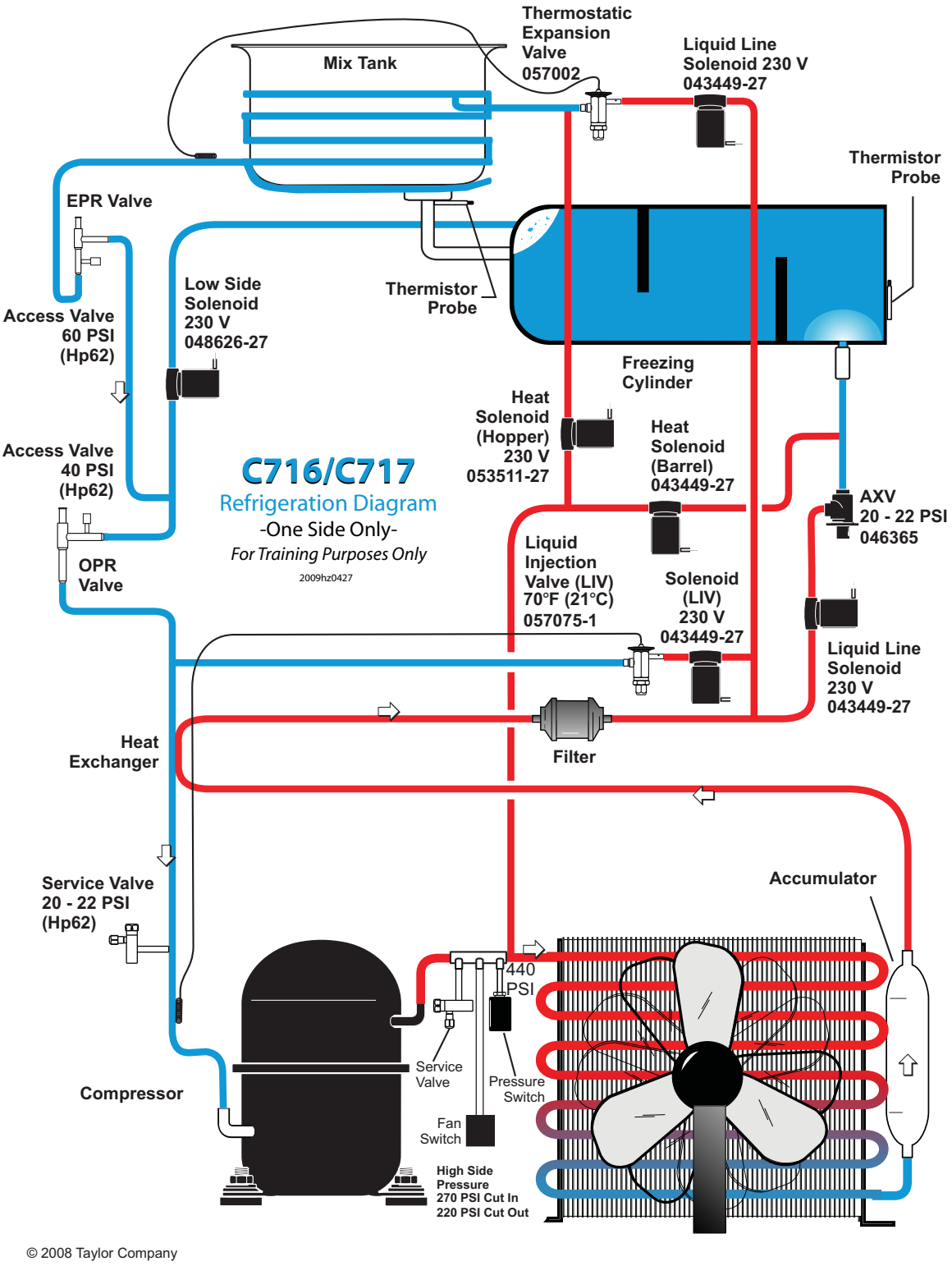
Refrigeration Schematic (Units Not Equipped With DBV Valves)



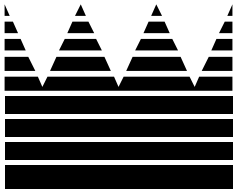
Refrigeration System Components

NAME	DESCRIPTION
Mix Hopper	20 qt. capacity, wrapped with 40' of 5/16” copper tubing
Freezing Cylinder	Conventional, 3.4 qt. flooded evaporator
Condenser	Lanced fin
Fans-Condenser	Motor A.-Fan 185 W 1400 RP
Compressor	Bristol (see Parts Update #196)
TXV	Thermo. controlled expansion valve for the mix hopper
AXV	Automatic expansion valve for the freezing cylinder
SV01	Barrel liquid solenoid valve
SV02	Hopper liquid solenoid valve
SV03	Barrel hot gas solenoid valve
SV04	Hopper hot gas solenoid valve
SV05	Barrel suction solenoid valve
SV06	Discharge bypass line solenoid valve
EPR	Alco, IPR-6, Inlet Pressure Upstream Regulator
OPR	Alco, OPR-10, Outlet Pressure Downstream Regulator
LIV	Liquid injection valve
DBV	Discharge bypass valve
Filter/Dryer	Dryer-Filter-HP62-3/8 x 1/4S
Heat Exchanger	15.25 joined length
Receiver	Accumulator

COMP LABEL	DESCRIPTION	FUNCTION	BASIC OPERATING LOGIC	INPUT / OUTPUT
Mix Hopper	20 quart capacity, conventional copper wrap	Storage of product mix, evaporator.		
Freezing Cylinder	3.4 quart capacity, conventional copper wrap	Freezing of product, evaporator.		
Condenser	Lanced fin	Cooling of compressed refrigerant.		
Fan - Condenser	Compact fan	Provides air flow to remove heat from condenser heat exchanger.	On with the compressor in Auto, Standby, and the cooling phase of the Heat mode. Operates for 30 seconds after the compressor shuts off.	Output
Compressor	Hermetically sealed	Compresses the refrigerant. Used for barrel and hopper cooling in Auto, Standby, and the cooling phase of the heat mode.	Enabled in Auto, Standby, and the Heat modes, Off in Wash and Off modes.	Output
TXV	Thermostatically controlled expansion valve in the hopper circuit.	Controls the refrigerant flow during cooling of the hopper.		
AXV	Automatic expansion valve of the freezing cylinder circuit	Controls the refrigerant flow during the cooling of the freezing cylinder.		
SV01	Barrel liquid solenoid valve	Controls the flow of refrigerant to the AXV.	Enabled in the Auto, Standby, and the cooling phase of the heat mode. Off in the Wash, Off, and heating phase of the Heat modes.	Output
SV02	Hopper liquid solenoid valve	Controls the flow of refrigerant to the TXV01.	Enabled in the Auto, Standby, and the cooling phase of the heat mode. Off in the Wash, Off, and heating phase of the Heat modes.	Output
SV03	Barrel hot gas solenoid valve	Controls the flow of hot gas refrigerant to the barrel.	Enabled in the heat phase of the Heat mode. Off in the Auto, Standby, and the cooling phase of the heat mode.	Output
SV04	Hopper hot gas solenoid valve	Controls the flow of hot gas refrigerant to the hopper.	Enabled in the heat phase of the Heat mode. Off in the Auto, Standby, and the cooling phase of the heat mode.	Output
SV05	Barrel suction solenoid valve	Controls the flow of refrigerant at the low pressure side of the barrel.	Is enabled anytime the barrel is being heated or cooled. Its purpose is to prevent refrigerant flow when the hopper only is being refrigerated to prevent barrel freeze up.	
SV06	Discharge bypass line solenoid valve	Prevents leakage of refrigerant past the DBV.	Opens any time the hopper is being cooled.	

COMP LABEL	DESCRIPTION	FUNCTION	BASIC OPERATING LOGIC	INPUT / OUTPUT
EPR	Inlet Pressure Upstream Regulator	Limits the minimum refrigerant pressure in the hopper (currently set to 60 psig).	Limiting the minimum refrigerant pressure in the hopper prevents freezing of product mix on the hopper wall.	
OPR	Outlet Pressure Downstream Regulator	Limits the maximum pressure in the compressor inlet (currently set to 40 psig).	Limiting the inlet pressure to the compressor helps prevent overloading of the compressor.	
LIV	Liquid Injection Valve	Controls the injection of liquid refrigerant into the suction line.	Liquid refrigerant is injected into the suction line to lower the discharge temperature of the compressor during the cooling phase of the Heat mode.	
DBV	Hot gas discharge bypass valve. This is an AXV valve.	Allows refrigerant to short circuit – essentially cutting the capacity of the compressor when the hopper alone is being cooled.	Refrigerant is passed through this valve when the hopper alone is being cooled.	
Filter/Dryer		This keeps moisture, dirt, metal, and chips from entering the refrigerant flow control valves.		
Heat Exchanger (sub cooler)		This allows the liquid refrigerant to be cooled before it reaches the AXV and TXV.	When the liquid is subcooled before it reaches the refrigerant control, the refrigeration effect per unit mass of refrigerant is increased.	
Receiver		The liquid receiver is a storage tank for liquid refrigerant.	The use of a liquid receiver makes the quantity of refrigerant in a system less critical.	

Notes:



Section 3: Troubleshooting

- **General Troubleshooting**
- **Electrical Troubleshooting**
- **Pump Style Freezer Troubleshooting**
- **Solenoid Valve Failure Troubleshooting**
- **Bacteria Troubleshooting**

General Troubleshooting Guide

PROBLEM	CAUSE	REMEDY
1. Compressor will not run.	a. The power switch is in the “OFF” position.	a. Place the switch in the “ON” position.
	b. An error has been made in key pad selection.	b. Press the correct key for AUTO operation.
	c. The contactor is faulty.	c. Replace the contactor.
	d. The compressor has burned out.	d. Replace the compressor.
	e. The fuse or circuit breaker has blown.	e. Replace the fuse, or turn on the breaker.
	f. Tripped overload (compressor).	f. Place the power switch in the “OFF” position. Allow the compressor to cool and the overload to close before returning the power switch to the “ON” position. Check the connections of the TXV bulbs.
	g. Off on reset (beater motor).	g. Press the reset button.
2. Unit operates long.	a. Scraper blades are worn.	a. Replace scraper blades.
	b. High overrun product (C708/C716).	b. Check pump operation for correct air/mix ratio.
3. Head pressure is too high.	a. Condenser is dirty.	a. Clean condenser.
	b. Water valve is out of adjustment or is restricted.	b. Check the adjustment and the water supply.
	c. Insufficient air space around unit.	c. Make sure there is sufficient air space surrounding the unit (see “Specifications”).
	d. Refrigerant overcharge.	d. Correct refrigerant charge.
	e. Blower is faulty.	e. Replace the blower.
4. Head pressure is too low.	a. Refrigerant shortage.	a. Repair leak and recharge.
5. Liquid line is hot.	a. Shortage of refrigerant.	a. Repair leak and recharge.
6. Excessive mix leakage through the rear of the unit into the drip pan.	a. Worn or missing drive shaft seal.	a. If worn, nicked or missing, replace the drive shaft seal.
	b. Inadequate lubrication.	b. Lubricate properly.
	c. Drive shaft rotates forward.	c. Check gear alignment.

PROBLEM	CAUSE	REMEDY
7. Low overrun.	a. Bad scraper blades.	a. Replace scraper blades.
	b. Faulty air/mix pump components (C708/C716).	b. Inspect air/mix pump components and replace those found faulty.
	c. Restricted air intake (air/mix pump) (C708/C716).	c. Clear restriction.
	d. Long “ON” cycles.	d. See problem #2.
8. Draw valve leaking.	a. Worn or missing draw valve o-rings.	a. Replace regularly.
	b. Inadequate lube on draw valve o-rings.	b. Lubricate properly.
	c. Wrong type of lubricate being used.	c. Use proper lubricant. Example: Taylor Lube High Performance.
9. Product is not being fed into the freezing cylinder.	a. Inadequate mix in the hopper (mix out light is lit).	a. Fill hopper with mix.
	b. Air/mix pump incorrectly assembled (C708/C716).	b. Assemble pump according to instructions in the Operator's Manual.
	c. Incorrect usage of the mix feed tube (C709/C717).	c. Follow the correct feed tube procedures and use of the air orifice.
10. No product being dispensed with draw valve open and machine in “AUTO” mode.	a. Plugged door spout.	a. Break down the machine and dislodge the door spout clog.
	b. Beater rotating counterclockwise.	b. Correct beater rotation to clockwise.
	c. Inadequate mix in the hopper (mix out light is lit).	c. Fill hopper with mix.
11. Product too soft.	a. Not enough air space surrounding unit.	a. Allow 6” (152 mm) minimum clearance around both sides of unit and place the back against a wall.
	b. Bad scraper blades.	b. Replace scraper blades.
	c. Dirty air-cooled condenser.	c. Clean monthly.
	d. Outdated mix.	d. Use fresh mix.
	e. Refrigerant shortage.	e. Locate leak and repair.
	f. Product viscosity set too warm.	f. Adjust product viscosity.
	g. Incorrect usage of the mix feed tube (C709/C717).	g. Follow the correct feed tube procedures and use of the air orifice.
	h. Incorrect DBV setting.	h. See “Checking and Setting Refrigeration Valves.”
12. Plugged door spout.	a. Poor scraping.	a. Replace scraper blades.
	b. Damaged draw valve o-rings.	b. Replace o-rings.
	c. Damaged beater assembly.	c. Inspect and replace if necessary.
	d. Worn rear shell bearing.	d. Inspect and replace if necessary.

PROBLEM	CAUSE	REMEDY
13. No freezer operation when placing unit in any mode of operation.	a. Unit unplugged.	a. Plug in unit.
	b. Circuit breaker is turned off or fuse is blown.	b. Turn on circuit breaker or replace fuse.
	c. Power switch is in the “OFF” position.	c. Place power switch in the “ON” position.
14. Product too stiff.	a. Product viscosity set too cold.	a. Adjust product viscosity.
	b. Incorrectly assembled or malfunctioning air/mix pump (C708/C716).	b. Re-assemble pump or replace faulty components.
15. Mix in the hopper is too cold.	a. Temperature is out of adjustment.	a. Adjust hopper temperature.
	b. Agitator paddle is not installed.	b. Install the agitator paddle.
16. Mix in the hopper is too warm.	a. Temperature is out of adjustment.	a. Adjust hopper temperature.
	b. Agitator not installed.	b. Install the agitator.
17. Drive shaft is stuck in the gear box coupling.	a. Corners of the drive shaft, coupling, or both are rounded.	a. Replace the necessary component(s). Do not lubricate the end of the drive shaft.
	b. Mix and lubricant are collected in the drive coupling.	b. Brush clean the rear shell bearing area regularly.
18. Freezing cylinder walls are scored.	a. Bent beater assembly.	a. Replace beater.
	b. Missing or worn front bearing.	b. Install or replace front bearing.
	c. Scraper blades incorrectly installed.	c. Install scraper blades over the appropriate securing pin on the beater assembly.
19. Product is “popping” when drawn.	a. Draw rate set too fast.	a. Set the draw rate at 5 - 7-1/2 ounces of product per 10 seconds.
	b. Pump is assembled/lubed incorrectly (C708/C716).	b. Assemble pump according to instructions in the Operator's Manual.
	c. Freezer has been turned on and off several times.	c. Place the unit in the “OFF” position only when necessary.
20. Freezer shuts off and produces a fault tone.	a. Fault alert.	a. Check the fault screen in the operator's menu.
	b. Insufficient air space.	b. Allow 6” (152 mm) minimum clearance around both sides of unit and place the back against a wall.
21. Soft lock.	a. No heat cycle tried.	a. Press the word “AUTO” to place freezer in the heat treatment cycle, or press the word “WASH” and brush clean the freezer.
22. When “AUTO” is pressed, freezer goes into “STANDBY”.	a. Mix-out condition.	a. Add mix.
	b. Hard lock.	b. Check the display screen for instructions.

PROBLEM	CAUSE	REMEDY
23. Unit changes modes or shuts itself off.	a. Faulty connections of membrane switch.	a. Replace faulty components.
24. Unit enters a heat treatment cycle at “odd times”.	a. Faulty interface board.	a. Replace interface board.
25. “Product Door Off” message is displayed.	a. The door is off or is loose.	a. Install the door and tighten the hand screws.
	b. Door switch is faulty.	b. Replace the switch.
	c. The door switch is not properly installed.	c. Make sure the door switch is fully inserted.
	d. The 24V relay is faulty.	d. Replace the relay.
	e. The agitator motor is faulty.	e. Replace the motor.
	f. There is low voltage from the 24V transformer.	f. Check the power supply connections, shorts, replace transformer.

Electrical Troubleshooting Guide

MODES OF OPERATION:

COMPONENT	HEAT			STANDBY	WASH	AUTO	PUMP
	Heat	Hold	Cool				
Compressor	X	X	X	X		X	
Beater Motor	X	X	X	X	X	X	
Fan	X	X	X	X		X	
Air/Mix Pump Motor						X	X
Agitator	X	X	X	X		X	

C708/C709 Electrical Troubleshooting Guide

Power Cord Plugged In/Power Switch in the OFF Position

L1 power from the power cord connection travels through the EMI filter to the 16 volt transformer. The transformer supplies 16 vac to terminals A and B on the interface board.

The interface board sends 5 vdc to terminal J1 on the universal board.

Power Switch in the ON Position

L1 power from the power cord connection is supplied to the terminals marked L1 on the interface board. To supply power to the L1 terminal on the interface board, L1 travels through the following switches: the power switch, the beater motor overload switch, the compressor high limit switch and the 15 amp. fuse.

Power Switch in the ON Position/Mode Select: WASH

With L1 power supplied to the L1 terminal of the interface board, power is supplied through pin 7 of the J6 terminal, beater interlock relay and to the beater motor contactor coil.

Power Switch in the ON Position/Mode Select: PUMP

With L1 power supplied to the L1 terminal of the interface board, power is supplied through pin 5 of the J6 terminal to the air/mix pump motor overload and then to the air/mix pump motor.

Power Switch in the ON Position/Mode Select: AUTO

Power is sent from the L1 terminal of the interface board through the following pins on the J6 terminal:

7 for the beater motor contactor coil
6 for the condenser fan
5 for the air mix pump (30 seconds only)
4 for the barrel suction solenoid
3 for the hopper liquid solenoid and hot gas bypass (DBV)
2 for the barrel liquid solenoid
1 for the compressor contactor coil

To operate the agitator, L1 is supplied to the agitator motor power transformer (24V) from the power switch. The transformer supplies power to terminal J5, pin 1 of the interface board. From pin 1, power is supplied through the following pin:

4 for agitator motor

Power Switch in the ON Position/Mode Select: AUTO/Draw Switch Activated

Power is sent from the L1 terminal on the interface board through the following pins on the J6 terminal:

7 for the beater motor contactor coil
6 for the condenser fan
5 for the air/mix pump (The pump runs for 10 seconds after the draw handle is closed.)
4 for the suction solenoid
2 for the barrel liquid solenoid
1 for the compressor contactor coil

At the completion of a draw, the beater motor and compressor are cycled off by the personality board amp. monitor.

Power Switch in the ON Position/Mode Select: AUTO/Heat Cycle Activated

Power is sent from the L1 terminal on the interface board through the following pins of the J6 terminal:

7 - Beater Motor
6 - Condenser Fan
4 - Refrigeration Evaporator Suction Solenoid
1 - Main Refrigeration Compressor Contactor Coil

L1 is supplied to the power transformer (24 vac) from the power switch. The transformer supplies power to terminal J5, pin 1 of the interface board. From pin 1, power is supplied through the following pins:

6 - Barrel Hot Gas Solenoid Relay
5 - Hopper Hot Gas Solenoid Relay
4 - Agitator Motor

C716/C717 Electrical Troubleshooting Guide

Power Cord Plugged In/Power Switch in the OFF Position

L1 power from the power cord connection travels through the EMI filter to the 16 volt transformer. The transformer supplies 16 vac to terminals A and B on the interface board.

The interface board sends 5 vdc to terminal J1 on the universal board.

Power Switch in the ON Position

L1 power from the power cord connection is supplied to the terminals marked L1 on the interface board. To supply power to the L1 terminal on the interface board, L1 travels through the following switches: the power switch, the beater motor overload switch, the compressor high limit switch and the 15 amp. fuse.

Power Switch in the ON Position/Mode Select: WASH

With L1 power supplied to the L1 terminal of the interface board, power is supplied through pin 7 of the J6 terminal, beater interlock relay and to the beater motor contactor coil.

Power Switch in the ON Position/Mode Select: PUMP

With L1 power supplied to the L1 terminal of the interface board, power is supplied through pin 5 of the J6 terminal to the air/mix pump motor overload and then to the air/mix pump motor.

Power Switch in the ON Position/Mode Select: AUTO

Power is sent from the L1 terminal of the interface board through the following pins on the J6 terminal:

7 for the beater motor contactor coil
5 for the air mix pump (30 seconds only)
4 for the barrel suction solenoid
3 for the hopper liquid solenoid and hot gas bypass (DBV)
2 for the barrel liquid solenoid
1 for the compressor contactor coil

To operate the agitator, L1 is supplied to the agitator motor power transformer (24V) from the power switch. The transformer supplies power to terminal J5, pin 1 of the interface board. From pin 1, power is supplied through the following pin:

4 for agitator motor

Power Switch in the ON Position/Mode Select: AUTO/Draw Switch Activated

Power is sent from the L1 terminal on the interface board through the following pins on the J6 terminal:

7 for the beater motor contactor coil
5 for the air/mix pump (The pump runs for 10 seconds after the draw handle is closed.)
4 for the suction solenoid
2 for the barrel liquid solenoid
1 for the compressor contactor coil

At the completion of a draw, the beater motor and compressor are cycled off by the personality board amp. monitor.

Power Switch in the ON Position/Mode Select: AUTO/Heat Cycle Activated

Power is sent from the L1 terminal on the interface board through the following pins of the J6 terminal:

7 - Beater Motor
4 - Refrigeration Evaporator Suction Solenoid
1 - Main Refrigeration Compressor Contactor Coil

L1 is supplied to the power transformer (24 vac) from the power switch. The transformer supplies power to terminal J19, pin 1 of the interface board. From pin 1, power is supplied through the following pins:

J18

2 - Agitator Motor
1 - Barrel Hot Gas Solenoid Relay
2 - Hopper Hot Gas Solenoid Relay

Pump Style Freezer Troubleshooting

PROBLEM	PROBABLE CAUSE	REMEDY
1. Air/mix pump will not operate in the “AUTO” mode when the draw valve is opened.	a. The pump drive motor is off on reset.	a. Allow the unit to cool and press the reset button.
	b. Malfunctioning interface board.	b. Replace interface board.
	c. Faulty pump motor.	c. Replace motor.
	d. Faulty connection or draw switch.	d. Check connections or replace switch.
2. Excessive pump cylinder wear.	a. Inadequate or incorrect lubrication of pump cylinder.	a. Lubricate properly.
	b. Ball crank rotates clockwise.	b. Rewire ball crank rotation to rotate counterclockwise.
3. Not enough pressure in the freezing cylinder.	a. Malfunctioning draw switch.	a. Reposition or replace the microswitch.

Solenoid Valve Failure Troubleshooting

These hot gas units were tested to determine symptoms exhibited by the units when the solenoid valves fail. The following are the test results.

Barrel Hot Gas Solenoid Valve

a. Stuck Closed: Will cause a failure of the heat cycle, heat phase.

b. Stuck Open/Leaking: Will cause a failure of the heat cycle, cool phase.

Product in the barrel will not freeze down to temperature, or if frozen at time of malfunction will cause poor product quality. The initial draw with compressor off will be sloppy.

Suction Pressure will be high (about 5 psi [35 kPa] above setting).

Hopper Hot Gas Solenoid Valve

a. Stuck Closed: Will cause a failure of the heat cycle, heat phase.

b. Stuck Open/Leaking: Will cause a failure of the heat cycle, cool phase.

Will warm product in the hopper above acceptable level.

Pressures: Suction was 30 psi (207 kPa), discharge was 175 psi (1,207 kPa).

Barrel Suction Solenoid Valve

a. Stuck Closed: Product will not freeze properly in Auto, and will fail heat cycle.

Compressor Will Fail: Suction pressure dropped to DBV setting and discharge psi also dropped.

Compressor sump temperature rose to 200°F (93°C) in 30 minutes.

b. Stuck Open/Leaking: Product in barrel will cool while the hopper cools with the beater off. The belt is squealing, and there is low suction psi.

Will not cause a heat cycle failure but will be an issue after long hopper cooling period in Standby after heat cycle.

Barrel Liquid Solenoid Valve

a. Stuck Closed: Product will not freezer down in the Auto mode or cool in the Standby mode.

Compressor Will Fail: Suction pressure was in a vacuum, discharge pressure was 175.

The compressor cut out on internal overload in 9 minutes.

b. Stuck Open/Leaking: Will fail the heat cycle in the heat phase.

The product will be cold and lumpy, and there will be poor ejection.

Hopper Liquid Solenoid Valve

a. Stuck Closed: Will fail heat cycle, cool phase. Product will not cool in Auto or Standby modes.

Suction pressure is below DBV setting with hopper only cooling.

b. Stuck Open/Leaking: Will fail the heat cycle in the heat phase.

In Auto or Standby modes, the hopper product cools to 32°F (0°C).

Hot Gas Bypass Valve (DBV) Solenoid Valve

a. Stuck Closed: Suction will run in a vacuum cooling the hopper only. Frost back occurred at the compressor.

Sloppy product for initial draw.

b. Stuck Open/Leaking: Trouble setting the barrel suction pressure due to DBV influence. Poor (cold, lumpy) product quality.

If DBV is set to close to the barrel AXV, cooling will take longer.

Expected results with metering valves out of adjustment:

DBV: Too low could cause system to run in a vacuum with hopper only cooling.

Too high will cause inefficiency if set too close to AXV.

AXV: Too low will cause lower evaporator and product temperatures. Possible heavy scraping of blades and barrel freeze up.

Too high will cause longer run times, warmer evaporator and product temperatures.

EPR: Too low will cause hopper product to freeze to the sides.

Too high will cause longer run times and could cause the hopper product to be warmer than 40°F (4.4°C).

OPR: Too low will cause extended heat cycle heat phase times, less efficiency.

Too high will cause over amping of the compressor in the heat cycle heat phase and high pressure cut out in the cool phase.

The OPR is very sensitive to high ambient conditions. Must be set in the ambient the machine will run in.

TXV: The TXV is not adjustable.

Bacteria Troubleshooting

Periodic product sampling is taken by a sanitarian. Bacteria counts should not exceed the following figures:

Standard Plate Count (SPC) 50,000
Coliform 10

If the counts exceed the numbers listed, steps should be taken to locate the cause. Failure to solve the high counts will result in an unsafe product for consumption. Educate the operator about how to prevent high bacteria counts.

Note: High bacteria counts in soft serve *yogurt* is normal and necessary. Coliform, however, cannot be accepted in any product. The following information will help solve high coliform count problems.

If sample results indicate a problem, one of these areas may be a source of contamination.

CAUSE OF CONTAMINATION	PREVENTION
1. Human contamination.	a. Wash hands and arms past elbows. b. Wear rubber gloves if cuts or skin conditions exist. c. Wash hands periodically throughout the day.
2. Residue product deposits on mix contact surfaces (milkstone build-up).	a. Provide the proper brushes. b. Brush clean all parts and components thoroughly. Ignoring this will allow formation of milkstone, a porous substance which will house bacteria and can lead to contamination of fresh mix.
3. Worn, damaged, or cracked parts.	a. Provide a food grade lubricant (Example: Taylor Lube). b. Inspect o-rings for holes or tears. O-rings, seals and other wear items must be supplied by the freezer company to meet food industry standards. c. During the operating hours, periodically inspect the rear drip pan for excessive leakage.
4. Improper cleaning and sanitation procedures.	a. For cleaning procedures, scrub the sink and strainers thoroughly before each use. The level of solution in each basin must allow the largest component to be submerged. Sanitize and prime the freezer prior to freezing the product. After sanitizing a freezer, use fresh mix to flush remaining sanitizer from the freezing cylinder. b. Provide the proper brushes, lubricants, and single service towels. c. Store sanitizer in a cool, dry place. Use chemicals according to their labels.

CAUSE OF CONTAMINATION	PREVENTION
4. Improper cleaning and sanitation procedures. *(Continued)*	d. Use a few good employees to follow the cleaning procedure correctly and consistently. Allow the employee uninterrupted time to complete the cleaning procedure. e. Hold sanitizing solution in the hopper and the freezing cylinder for five minutes. f. Wash and sanitize the tube of lubricant; after each use, always recap the tube. g. Parts, components, and brushes should be air-dried overnight. Never store the equipment in the storage cooler. h. Do not neglect daily cleaning practices: wipe the external areas of the freezer periodically throughout the day, remove the design caps and sanitize the area, check the drip trays and splash shield.
5. Mix stored improperly.	a. Rotate stock to use older date code mix first. Shelf life of mix is normally 10 days. b. Mix must never be stacked outside or under direct sunlight while waiting to be placed in the cooler. c. Place the mix directly in the cooler. Always leave one inch between the mix and other products to allow air to circulate around the product. d. Mix must not remain at room temperature for long periods of time. e. Hopper storage must maintain a temperature of 39°F. (3.9°C.). Storage temperatures above 45°F. will allow cell division in as little as one hour. f. Once the mix is placed in the hopper, covers must be properly installed to maintain adequate refrigeration and to prevent airborne contaminants from entering the mix.

Notes:

Section 4: Parts

- **Parts Warranty Explanation**
- **Parts Identification**
- **Parts List**
- **Wiring Diagrams**

Parts Warranty Explanation

Class 103 Parts: The warranty for new equipment parts is one year from the original date of unit installation, with a replacement parts warranty of three months.

Class 212 Parts: The warranty for new equipment parts is two years from the original date of unit installation, with a replacement parts warranty of twelve months.

Class 512 Parts: The warranty for new equipment parts is five years from the original date of unit installation, with a replacement parts warranty of twelve months.

Class 000 Parts: Wear Items - no warranty.

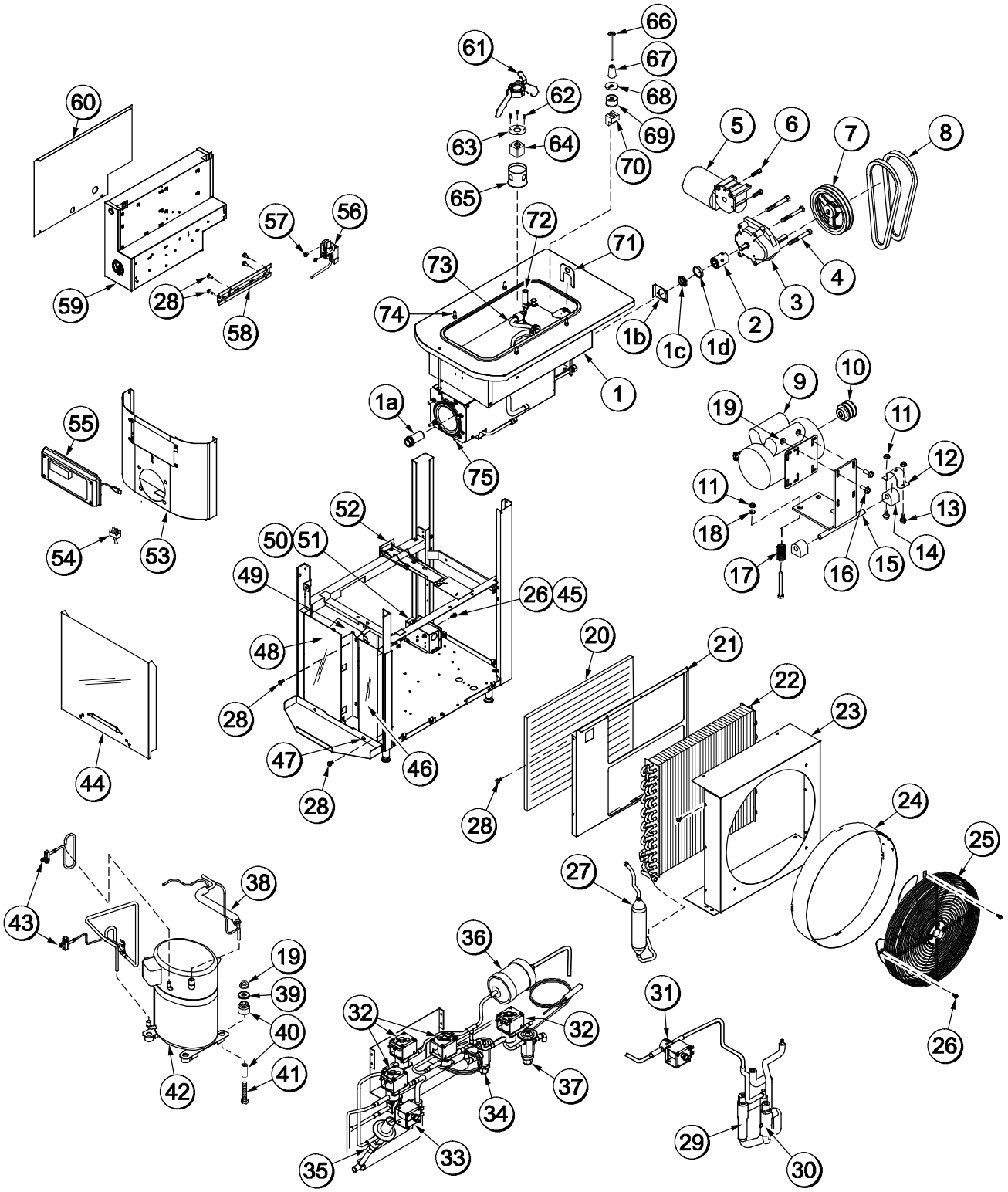
CAUTION: Warranty is valid only if the parts are authorized Taylor parts, purchased from an authorized Taylor Distributor, and the required service work is provided by an authorized Taylor service technician.

Taylor reserves the right to deny warranty claims on equipment or parts if non-approved parts or refrigerant were installed in the machine, system modifications were performed beyond factory recommendations, or it is determined that the failure was caused by neglect or abuse.

NOTE: See your Authorized Taylor Distributor for possible labor warranty.

Notes:

Model C708 Exploded View



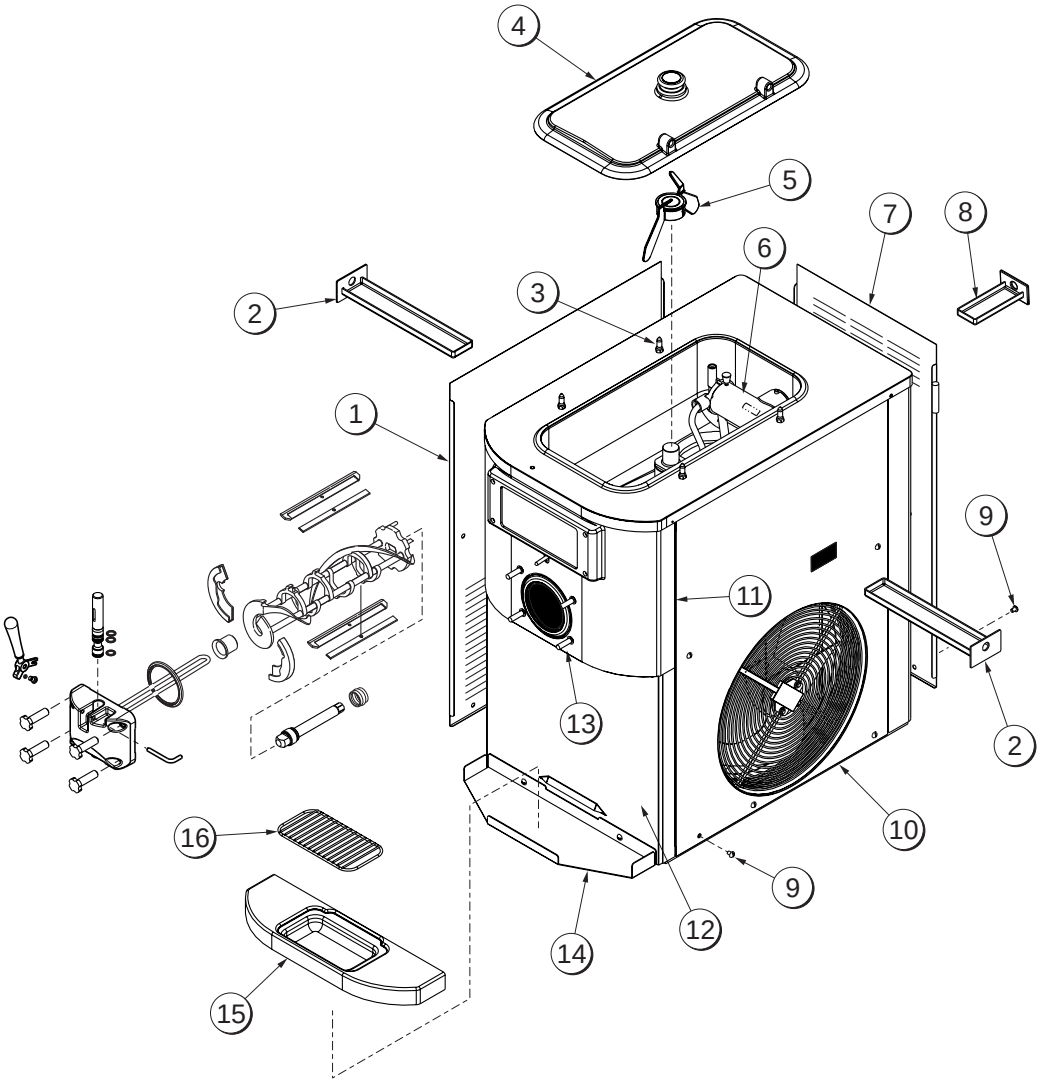
090514

Model C708 Exploded View Parts Identification

ITEM	DESCRIPTION	PART NO.
1	SHELL A. INSULATED	X56969-SER
1a	BEARING -REAR SHELL	031324
1b	WASHER - BEARING LOCK	012864
1c	NUT-BRASS BEARING	028991
1d	GUIDE - DRIP SEAL	028992
2	COUPLING - DRIVE 3/4 HEX	012721
3	GEAR A. REDUCER 4.21:1	021286-SER
4	SCREW - 5/16-18 X 2-3/4 HEX	004191
5	MOTOR - REDUCER 32 RPM	036955-34
6	SCREW - 1/4-20 X 3/4 SOC HD	020128-2
7	PULLEY - 2AK7-5/8	027822
8	BELT - AX39	023874
9	MOTOR - 1.5 HP	056865-27
10	PULLEY - 2AK22 X .625 - .6265	016403
11	NUT - 1/4-20 MF LOCK	017523
12	CLAMP - MOUNTING	012257
13	SCREW - 1/4-20 X 5/8 MF HEX	017522
14	BUSHING - RUBBER MOUNT	012258
15	HINGE A. - MOTOR	X25796
16	CAP - RUBBER MOUNT	011844
17	SPRING-COMP .970X.115 X 2	025707
18	WASHER - 5/16 FLAT ZP	000651
19	NUT - 5/16-18 MF LOCK	017327
20	FILTER - AIR - 21.688 X 15.813	052779-9
21	GUIDE - FILTER LEFT	056941
22	CONDENSER - AC 16 X 163	056944
23	SHROUD A. - CONDENSER	X56922
24	RING A. - AIR FLOW - COND	X57006
25	MOTOR A. FAN 185 WATT	500302-27
26	SCREW - 10-32 X 1/2 MF HEX	020982
27	RECEIVER A. REFRIG - AC	X59351
28	SCREW - 10 X 3/8 TYPE B	015582
29	VALVE - OPR	057008
30	VALVE - EPR	057009
31	VALVE - SOLENOID	048626-27
32	VALVE - SOLENOID 7/640 RF	043449-27
33	VALVE SOL. 1/8 ORF 1/4 IN	053511-27
34	VALVE - THERMOSTATIC	057002
35	VALVE-EXP-AUTO-1/4S X 1/4	046365
36	DRYER - FILTER HP62 - 3/8	048901

ITEM	DESCRIPTION	PART NO.
37	VALVE - TREV 3/8 X 3/8 ODF	055378
38	EXCHANGER A. - HEAT	X59354
39	CAP - RUBBER MOUNT	011844
40	KIT-MOUNTNG COMPRESSOR	052197
41	SCREW - 5/16-18 X 2-1/2 HEX	002498
42	COMPRESSOR - CS20K6E-PFV-238	057011-27
43	SWITCH - PRESSURE 440 PSI	X59361
44	PANEL A. - FRONT LOWER	X56954
45	NUT - 10-32 MF LOCK	020983
46	COVER A.-ACCESS-FRONT-R	X56948
47	SCREW-1/4-20 X 3/8 RHM-SS	011694
48	COVER A.-ACCESS-FRONT-L	X56949
49	BOX A.-CAP&RELAY MIX PMP	X56931-27
50	BOX - SPLICE	058121
51	COVER - BOX - SPLICE	058122
52	GUIDE A. - DRIP PAN	X28863
53	PANEL A. - FRONT UPPER	X57017
54	SWITCH - TOGGLE - DPDT	024295
55	PLATE A. - DEC.	X56959
56	SWITCH A. - DRAW	X56147
57	SCREW - 8 X 1/4 SL HEX HD	009894
58	BRACKET - CONTROL BOX	056927
59	CONTROL A.	X59239-27
60	COVER - CONTROL BOX	056929
61	BLADE A. - AGITATOR	X56591
62	SCREW 4-40 X 1/4 SOC SS	600165
63	PLATE - HOLDING - AGITATOR	056587
64	MOTOR - AGITATOR - 24 VAC	050535-03
65	BODY - AGITATOR HOUSING	056588
66	PROBE A. - MIX	X56912
67	SPACER - PROBE MIX UPPER	056985
68	PROBE - MIX OUT	056908
69	SPACER - PROBE MIX MIDDLE	056907
70	SPACER - PROBE - MIX	056985
71	CLIP - RETAINER - MIX PUMP	044641
72	PUMP A.-MIX SIMPLIFIED S.S.	X57029-14
73	TUBE A. FEED - HOPPER S.S.	X56521
74	PIN-RETAINING HOPPER CVR	043934
75	STUD- NOSE CONE	055987

Operator Parts (Model C708)

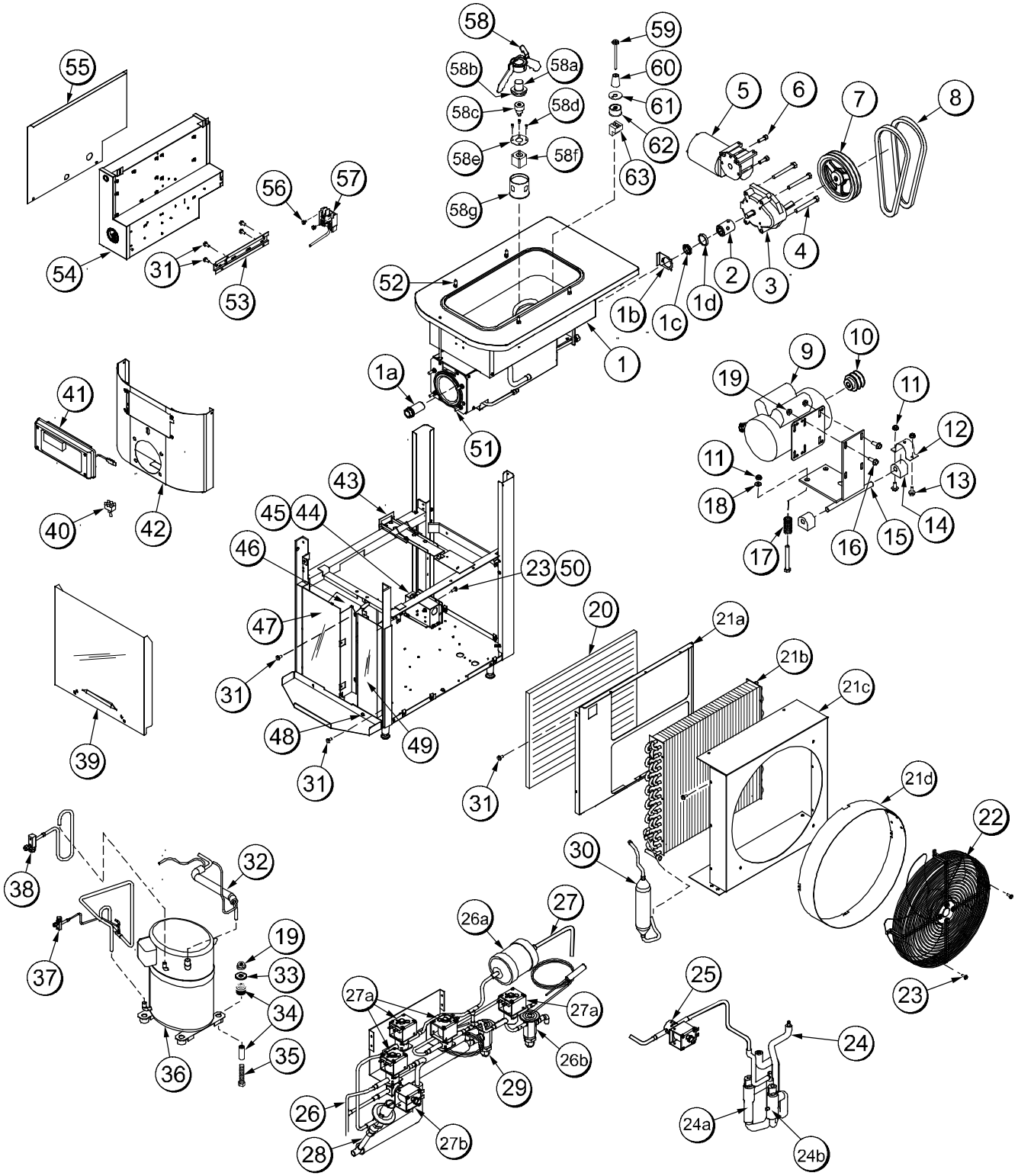


ITEM	DESCRIPTION	PART NO.
1	PANEL-SIDE-LEFT	056963
2	PAN-DRIP 11-5/8 LONG	027503
3	PIN-RETAINING-HOPPER CVR	043934
4	COVER-HOPPER *BLACK	053809-1
5	BLADE A.-AGITATOR	X56591
6	PUMP A.-MIX SIMPLIFIED S.S.	X57029-14
7	PANEL-REAR	056077
8	PAN A.-DRIP 5 1/2” LONG	X56074

ITEM	DESCRIPTION	PART NO.
9	SCREW-1/4-20X3/8 RHM-STNLS	011694
10	PANEL A-SIDE-RIGHT	X57871
11	PANEL A.-FRONT-UPPER	X59423
12	PANEL A.-FRONT-LOWER	X58955
13	STUD-NOSE CONE	055987
14	SHELF-TRAY-DRIP	056076
15	TRAY-DRIP	056858
16	SHIELD-SPLASH	049203

Notes:

Model C709 Exploded View



080805

Model C709 Exploded View Parts Identification

ITEM	DESCRIPTION	PART NO.
1	SHELL A.-INSULATED	X56969
1a	BEARING-REAR SHELL-NICK	031324
1b	WASHER-BEARING LOCK	012864
1c	NUT-BRASS BEARING	028991
1d	GUIDE-DRIP SEAL	028992
2	COUPLING-DRIVE 3/4 HEX	012721
3	GEAR A.*REDUCER 4.21:1	021286-SER
4	SCREW-5/16-18X2-3/4 HEX	004191
5	MOTOR-REDUCER 32 RPM	036955-34
6	SCREW-1/4-20X3/4 SOC HD	020128-2
7	PULLEY-2AK74-5/8	027822
8	BELT-AX39	023874
9	MOTOR-1.5 HP CAPS@8&10	056865-27
10	PULLEY-2AK22 X .625-.6265	016403
11	NUT-1/4-20 MF LOCK	017523
12	CLAMP-MOUNTING	012257
13	SCREW-1/4-20X5/8 MF HEX	017522
14	BUSHING-RUBBER MOUNT	012258
15	HINGE A.-MOTOR	X25796
16	SCREW-5/16-18 X 7/8 HEX	017973
17	SPRING-COMP.970X.115X2.00	025707
18	WASHER-5/16-FLAT ZP STEEL	000651
19	NUT-5/16-18 MF LOCK	017327
20	FILTER-AIR-21.688X15.813HX	052779-9
21a	GUIDE-FILTER-LEFT	056941
21b	CONDENSER-AC 16 X 16 3	056944
21c	SHROUD A.-CONDENSER	x56922
21d	RING A.-AIR FLOW-COND.	X57006
22	MOTOR A.-FAN 185 WATT	500302-27
23	SCREW-10-32X1/2 MF HEX	020982
24	LINE A.-EPR/OPR	X59349
24a	VALVE-OPR	057008
24b	VALVE-EPR	057009
25	VALVE-SOLENOID 7/16 ORF	048626-27
26	LINE A.-DRYER/VALVES	X59352-27
26a	DRYER-FILTER-HP62-3/8	048901
26b	VALVE-LIQUID INJ-HT GAS (air cooled units)	057075-1
	VALVE-TREV 3/8 X 3/8 ODF (water cooled units)	055378

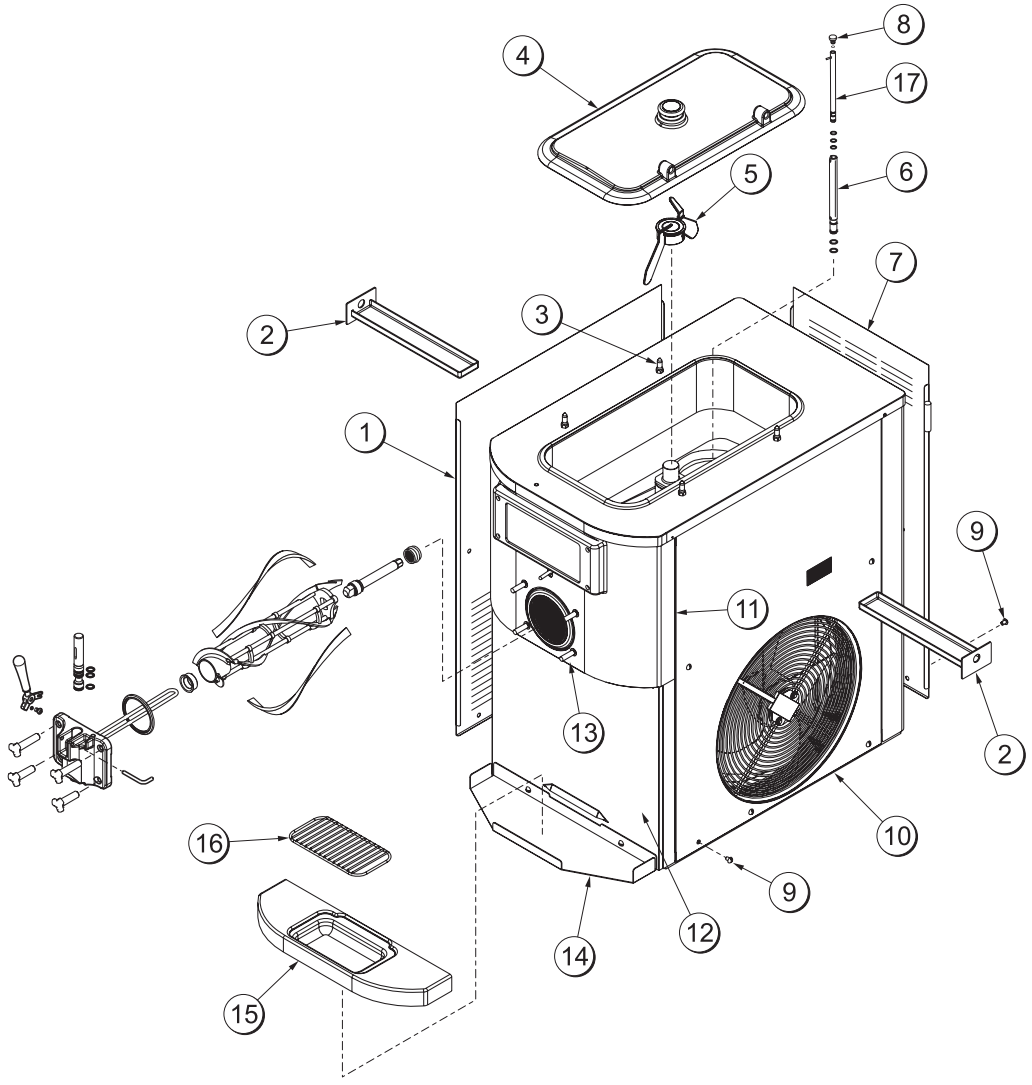
ITEM	DESCRIPTION	PART NO.
27	LINE A.-AXV/TXV	X65908-27
27a	VALVE-SOLENOID 7/640RF	043449-27
27b	VALVE-SOL 1/8ORF 1/4 IN	053511-27
28	VALVE-EXP-AUTO-1/4S X1/4	046365
29	VALVE-THERMOSTATIC	057002
30	RECEIVER A.-REFRIG.AC	X65909
31	SCREW-10X3/8 TYPE B	015582
32	EXCHANGER A.-HEAT	X65913
33	CAP-RUBBER MOUNT	011844
34	KIT-MOUNTING COMPRESSR	052197
35	SCREW-5/16 18 X 1-3/4	019691
36	COMPRESSOR L64A113BBCA	048259-27E
37	LINE A.-ACCESS-DISCH.	X65860
38	LINE A.-ACCESS-SUCTION	X65889
39	PANEL A.-FRONT-LOWER	X58955
40	SWITCH-TOGGLE-DPDT	024295
41	PLATE A.-DEC	X56959
42	PANEL A.-FRONT-UPPER	X59423
43	GUIDE A.-DRIP PAN	X28863
44	BOX-SPLICE	058121
45	COVER-BOX-SPLICE	058122
46	BOX A.-CAP&RELAY MIX PMP	X65737-27
47	COVER A.-ACCESS-FRONT-L	056946
48	SCREW-1/4-20 X 3/8 RHM-SS	011694
49	COVER A.-ACCESS-FRONT-R	056933
50	NUT-10-32 MF LOCK	020983
51	STUD-NOSE CONE	055987
52	PIN-RETAINING-HOPPER CVR	043934
53	BRACKET-CONTROL BOX	056927
54	CONTROL A.	X59239-27
55	COVER-CONTROL BOX	056929
56	SCREW-8 X 1/4 SL HEX HD B	009894
57	SWITCH A.-DRAW	X56147
58	BLADE A.-AGITATOR	X56591
58a	CAP-AGITATOR HOUSING	056589
58b	O-RING-1-3/8 OD X .070W	017395
58c	MAGNET A.-AGITATOR	X57341
58d	SCREW-4-40 X 1/4 SOC SS	600165

Model C709 Exploded View Parts Identification *(Continued)*

ITEM	DESCRIPTION	PART NO.
58e	PLATE-HOLDING-AGITATOR	056587
58f	MOTOR-AGITATOR-24VAC	050535-03
58g	BODY-AGITATOR HOUSING	056588
59	PROBE A.-MIX	X56912

ITEM	DESCRIPTION	PART NO.
60	SPACER-PROBE-MIX-UPPER	056910
61	PROBE-MIX OUT	056908
62	SPACER-PROBE-MIX-MIDDLE	056907
63	SPACER-PROBE-MIX	056985

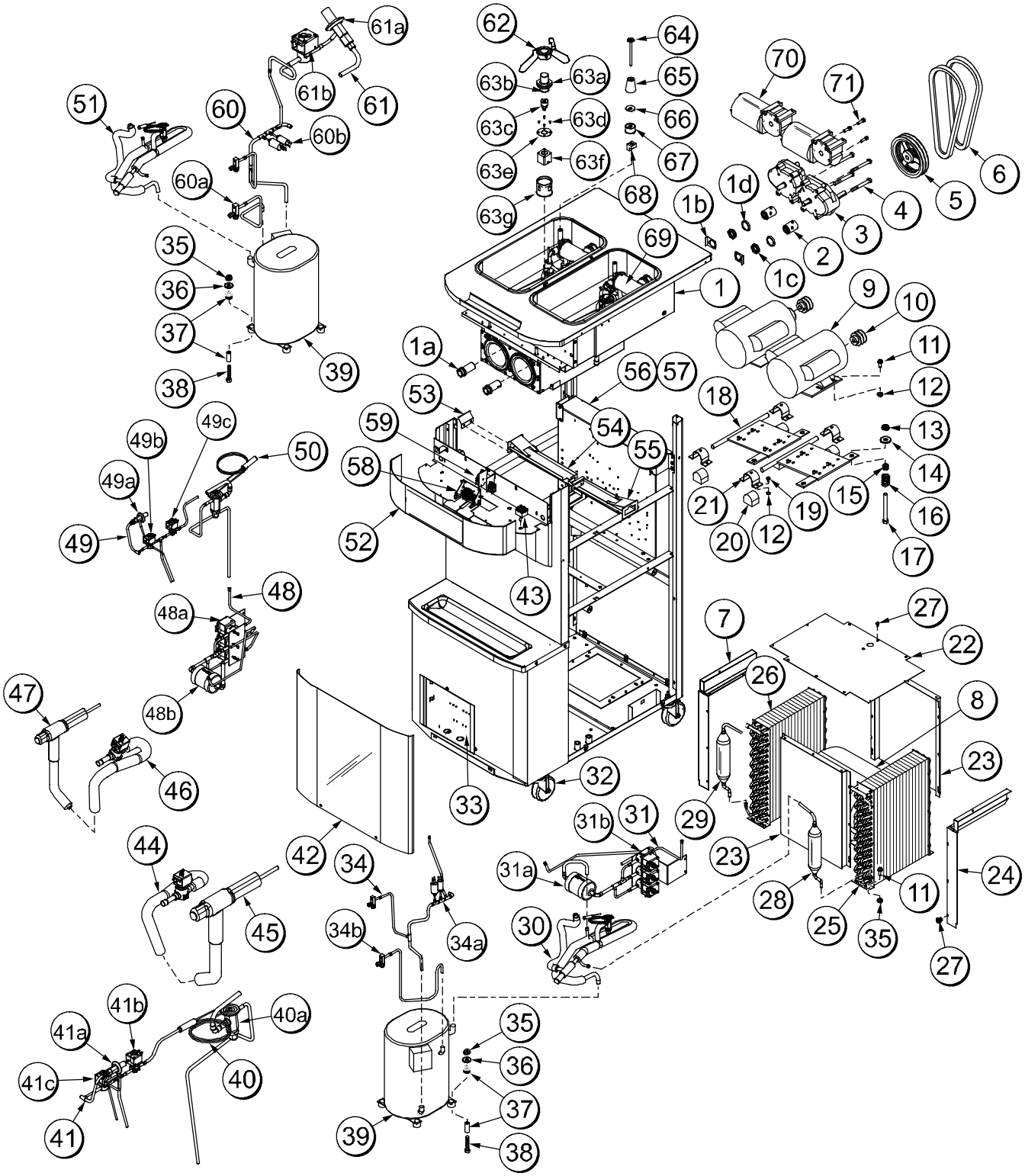
Operator Parts (Model C709)



ITEM	DESCRIPTION	PART NO.
1	PANEL-SIDE-LEFT	056963-SP1
2	PAN-DRIP 11-5/8 LONG	027503
3	PIN-RETAINING-HOPPER CVR	043934
4	COVER-HOPPER *BLACK	053809-1
5	BLADE A.-AGITATOR	X56591
6	TUBE A.-FEED-OUTER-HT	X34641
7	PANEL-REAR	056077-SP1
8	ORIFICE	022465-100
9	SCREW-1/4-20X3/8 RHM-SS	011694

ITEM	DESCRIPTION	PART NO.
10	PANEL A-SIDE-RIGHT	X57871
11	PANEL A.-FRONT-UPPER	X59423
12	PANEL A.-FRONT-LOWER	X58955
13	STUD-NOSE CONE	055987
14	SHELF-TRAY-DRIP	056076
15	TRAY-DRIP	056858
16	SHIELD-SPLASH	049203
17	TUBE A.-FEED-SC-INNER	X32824-2

Model C716 Exploded View



080805

Model C716 Exploded View Parts Identification

ITEM	DESCRIPTION	PART NO.
1	SHELL A.-INSULATED	X63818
1a	BEARING-REAR SHELL-NICKEL	031324
1b	WASHER-BEARING LOCK	012864
1c	NUT-BRASS BEARING	028991
1d	GUIDE-DRIP SEAL	028992
2	COUPLING-DRIVE 3/4 HEX	012721
3	GEAR A.*REDUCER 4.21:1	021286
4	SCREW-5/16-18X3 HEX CAP	009497
5	PULLEY-2AK74-5/8	027822
6	BELT-AX32	032769
7	GUIDE A.-FILTER-LEFT	X59931
8	BLOWER-HIGH OUTPUT-HTGS	059750-27
9	MOTOR-1.5 HP CAPS@10&2	021522-27
10	PULLEY-2AK22 X .625-.6265	016403
11	SCREW-5/16-18X7/8 HEX CAP	017973
12	NUT-1/4-20 MF LOCK	017523
13	NUT-FLANGE STOVER GRADE	011860
14	WASHER-5/16-FLAT ZP STEEL	000651
15	GROMMET-7/16 X 5/16 SHOCK	016212
16	SPRING-COMP.970X.115X1.5	032967
17	SCREW-5/16-18X2-1/2 HEX CAP	002498
18	HINGE A.-MOTOR	X25736
19	SCREW-1/4-20X5/8 MF HEX	017522
20	BUSHING-RUBBER MOUNT	012258
21	CLAMP-MOUNTING	012257
22	SHROUD-TOP	059838
23	SHROUD-FRONT & REAR	059884
24	GUIDE A.-FILTER-RIGHT	X59930
25	CONDENSER-AC 12LX18HX3.12T-5	055813-2
26	CONDENSER-AC 12LX18HX3.12T-5	055813-1
27	SCREW-10X3/8TYPEB-HWH	015582
28	RECEIVER A.-RIGHT*COPE	X59968
29	RECEIVER A.-LEFT*COPE-A	X59967

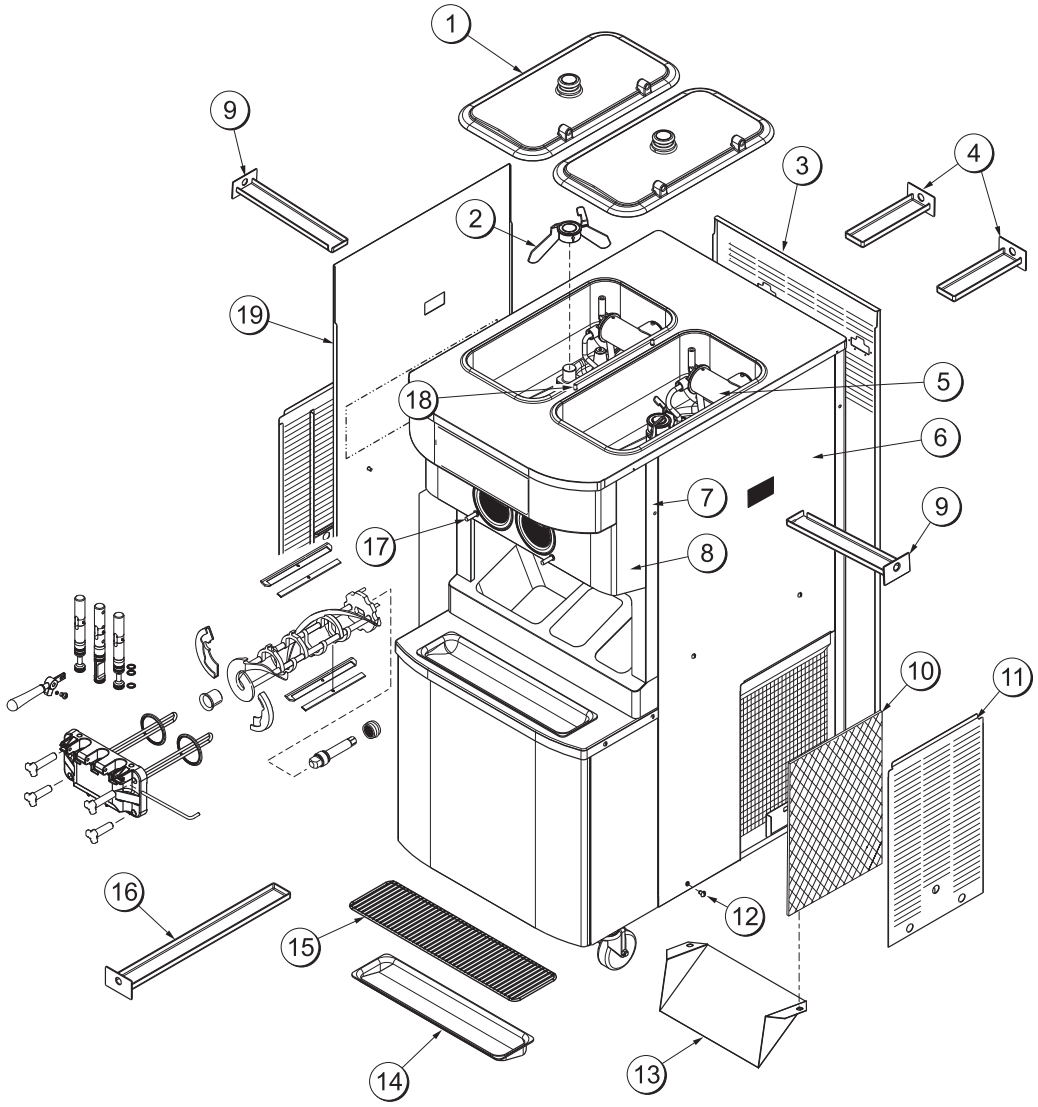
ITEM	DESCRIPTION	PART NO.
30	EXCHANGER A.-HEAT-R.	X59966
31	VALVE A.-LIQUID *RIGHT	X63953-27
31a	DRYER-FILTER 3/8 X 3/8 SOL	049154
31b	VALVE-TREV 1/4 ODF X 3/8	063951
31c	VALVE-SOLENOID 7/16 ORF	043449-27
32	CASTER 4” SWIVEL	044106
33	BOX A.-CAP&RELAY	X59499-27
34	LINE A.-DISCH.*RIGHT-A/	X59960
34a	SWITCH-PRESSURE 440 PSI	048230
34b	VALVE-ACCESS-1/4 MFL X 3/8	053565
35	NUT-5/16-18 MF LOCK	017327
36	CAP-RUBBER MOUNT	011844
37	KIT-MOUNTING-COMPRESSOR	052197
38	SCREW-5/16-18X1-3/4 HEX CAP	019691
39	COMPRESSOR CS20K6E-PFV-238	057011-27
40	VALVE A.-TXV-RIGHT	X59942
40a	VALVE-THERMOSTATIC	057002
41	VALVE A.-AXV-HOT GAS*R.	X59940-27
41a	VALVE-EXP-AUTO-1/4S X 1/4	046365
41b	VALVE-SOL 1/8 ORF 1/4 IN X 3/8	053511-27
41c	VALVE-SOLENOID 7/64 ORF	043449-27
42	PANEL A.-FRONT LOWER	X59854
44	LINE A.-SUCTION-OPR*R.	X59938-27
45	VALVE A.-EPR-RIGHT	X59946
46	LINE A.-SUCTION-OPR*L.	X59937-27
47	VALVE A.-EPR-LEFT	X59945
48	VALVE A.-LIQUID *LEFT	X63954-27
48a	VALVE-SOLENOID 7/64 ORF	043449-27
48b	DRYER-FILTER 3/8 X 3/8 SOL	049154
48c	VALVE-TREV 1/4 ODF X 3/8	063951
49	VALVE A.-AXV-HOT GAS*LEFT	X59939-27
49a	VALVE-EXP-AUTO-1/4S X 1/4	046365
49b	VALVE-SOLENOID 7/64 ORF	043449-27
49c	VALVE-SOL 1/8 ORF 1/4 IN X 3/8	053511-27

Model C716 Exploded View Parts Identification *(Continued)*

ITEM	DESCRIPTION	PART NO.
50	VALVE A.-TXV-LEFT	X59941
51	EXCHANGER-HEAT*COPE-L	X59965
52	PLATE A.-DEC	X62127
53	CLIP-PANEL*LEFT	056433
54	GUIDE A.-DRIP PAN-LEFT	X59910
55	GUIDE A.-DRIP PAN-RIGHT	X59911
56	CONTROL A.	X59497-27
57	COVER-CONTROL BOX	062599
58	ACTUATOR-DRAW SWITCH	X62401
59	SWITCH A.-DUAL LEVER	X62400
60	LINE A.-DISCH.*LEFT-A/C	X59959
60a	VALVE-ACCESS-1/4 MFL X 3/8	053565
60b	SWITCH-PRESS. 440 PSI-SDR	048230
61	LINE A.-DBV *LEFT	X59961-27
61a	VALVE-EXP-AUTO-1/4S X 1/4	046365
61b	VALVE-SOLENOID 7/64 ORF	043449-27
62	BLADE A.-AGITATOR	X56591

ITEM	DESCRIPTION	PART NO.
63	HOUSING A.-AGITATOR	X56586-03
63a	CAP-AGITATOR HOUSING	056589
63b	O-RING-1-3/8 OD X .070W	017395
63c	MAGNET A.-AGITATOR	X57341
63d	SCREW-4-40 X 1/4 SOC SS	600165
63e	PLATE-HOLDING-AGITATOR	056587
63f	MOTOR-AGITATOR-24VAC	050535-03
63g	BODY-AGITATOR HOUSING	056588
64	PROBE A.-MIX	X56912
65	SPACER-PROBE-MIX-UPPER	056910
66	PROBE-MIX OUT	056908
67	SPACER-PROBE-MIX-MIDDLE	056907
68	SPACER-PROBE-MIX	056985
69	PUMP A.-MIX SIMPLIFIED S.S.	X57029-14
70	MOTOR-REDUCER 32 RPM	036955-34
71	SCREW-1/4-20X3/4 SOC HD	020128-2

Operator Parts (Model C716)

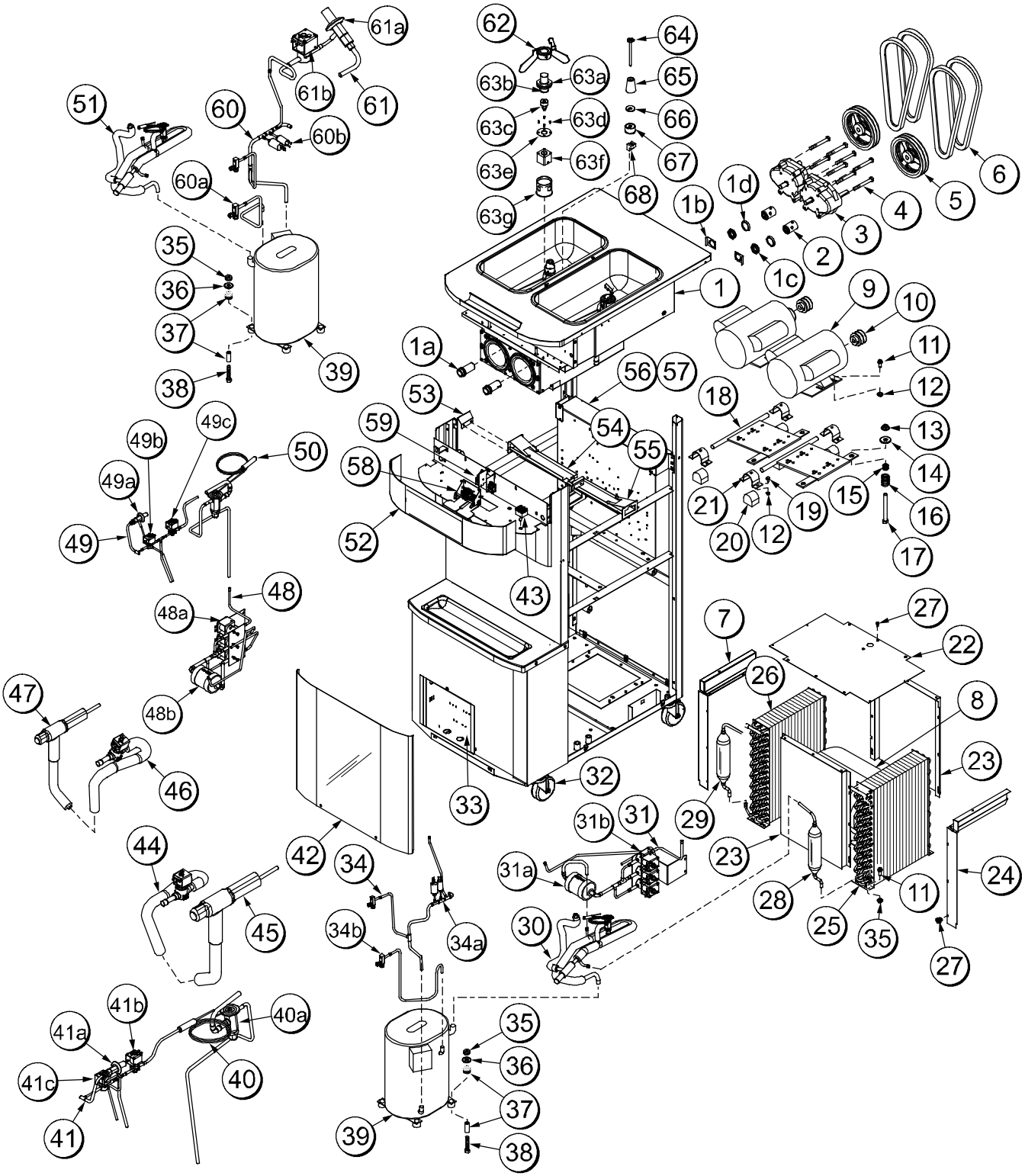


ITEM	DESCRIPTION	PART NO.
1	COVER-HOPPER	053809-1
2	BLADE A.-AGITATOR	X56591
3	PANEL-REAR	064258
4	PAN-DRIP 7.875	059737
5	PUMP A.-MIX SIMPLIFIED	X57029-14
6	PANEL-SIDE-RIGHT	059907
7	PANEL A.-FRONT	X59920
8	PANEL A.-FRONT	X59836
9	PAN-DRIP 12.5	059736
10	FILTER-AIR-POLY-FLO	052779-11

ITEM	DESCRIPTION	PART NO.
11	PANEL A.-FILTER-LOUVERED	X59928
12	SCREW-1/4-20 X 3/8 RHM-SS	011694
13	DEFLECTOR	059929
14	TRAY-DRIP-19-5/8 L X 4-7/8	033812
15	SHIELD-SPLASH-WIRE-19-3/4 L	033813
16	PAN-DRIP 19-1/2 LONG	035034
17	STUD-NOSE CONE	055987
18	PIN-RETAINING-HOPPER CVR	043934
19	PANEL-SIDE-LEFT	059906

080805

Model C717 Exploded View



Model C717 Exploded View Parts Identification

ITEM	DESCRIPTION	PART NO.
1	SHELL A.-INSULATED	X63819
1a	BEARING-REAR SHELL-NICKL	031324
1b	WASHER-BEARING LOCK	012864
1c	NUT-BRASS BEARING	028991
1d	GUIDE-DRIP SEAL	028992
2	COUPLING-DRIVE 3/4 HEX	012721
3	GEAR A.*REDUCER 4.21:1	021286-SER
4	SCREW-5/16-18X3 HEX CAP	009497
5	PULLEY-2AK64-5/8 BORE	039695
6	BELT-AX31	041575
7	GUIDE A.-FILTER-LEFT	X59931
8	BLOWER-HIGH OUTPUT-HTGS	059750-27
9	MOTOR-1.5 HP CAPS	021522-27
10	PULLEY-2AK22 X .625-.6265	016403
11	SCREW-5/16-18X7/8 HEX CAP	017973
12	NUT-1/4-20 MF LOCK	017523
13	NUT-FLANGE STOVER GRADE	011860
14	WASHER-5/16-FLAT ZP STEEL	000651
15	GROMMET-7/16 X 5/16 SHOCK	016212
16	SPRING-COMP.970X.115X2.0	025707
17	SCREW-5/16-18X3 HEX CAP	009497
18	HINGE A.-MOTOR	X25736
19	SCREW-1/4-20X5/8 MF HEX	017522
20	BUSHING-RUBBER MOUNT	012258
21	CLAMP-MOUNTING	012257
22	SHROUD-TOP	059838
23	SHROUD-FRONT & REAR	059884
24	GUIDE A.-FILTER-RIGHT	X59930
25	CONDENSER-AC 12LX18H	055813-2
26	CONDENSER-AC 12LX18H	055813-1
27	SCREW-10X3/8TYPEB-HWH	015582
28	RECEIVER A. R-A/C	X66027
29	RECEIVER A. L-A/C	X66029
30	EXCHANGER A.-HEAT-R	X66069
31	VALVE A.-LIQUID *RIGHT	X63953-27
31a	DRYER-FILTER 3/8 X 3/8 SOL	049154

ITEM	DESCRIPTION	PART NO.
32	CASTER-4” SWIVEL	044106
33	BOX A.-CAP&RELAY	X65402-27
34	LINE A.-DISCH.*RIGHT-A/	X66056
34a	SWITCH-PRESSURE 440 PSI	048230
34b	VALVE-ACCESS-1/4 MFL X 3/8	053565
35	NUT-5/16-18 MF LOCK	017327
36	CAP-RUBBER MOUNT	011844
37	KIT-MOUNTING-COMPRESSOR	052197
38	SCREW-5/16-18X1-3/4 HEX	019691
39	COMPRESSOR CS17K6E-PFV-238	052397-27E
40	VALVE A.-TXV-RIGHT	X66028
40a	VALVE-THERMOSTATIC	057002
41	VALVE A.-AXV-HOT GAS*R.	X63023-27
41a	VALVE-EXP-AUTO-1/4S X 1/4	046365
41b	VALVE-SOL 1/8 ORF 1/4” X 3/8	053511-27
41c	VALVE-SOLENOID 7/64 ORF	043449-27
42	PANEL A.-FRONT LOWER	X59854
43	HARNESS-WIRE POWER SW	062051
44	LINE A.-SUCTION-OPR*R.	X66056
45	VALVE A.-EPR-RIGHT	X66060
46	LINE A.-SUCTION-OPR*L.	X63035-27
47	VALVE A.-EPR-LEFT	X66059
48	VALVE A.-LIQUID *LEFT	X63954-27
48a	VALVE-SOLENOID 7/64 ORF	043449-27
48b	DRYER-FILTER 3/8 X 3/8 SOL	049154
49	VALVE A.-AXV-HOT GAS*LEFT	X63036-27
49a	VALVE-EXP-AUTO-1/4S X 1/4	046365
49b	VALVE-SOLENOID 7/64 ORF	043449-27
49c	VALVE-SOL 1/8 ORF 1/4” X 3/8	053511-27
50	VALVE A.-TXV-LEFT	X63037
51	EXCHANGER A.-HEAT-L.	X63031
52	PLATE A.-DEC	X62128

Model C717 Exploded View Parts Identification *(Continued)*

ITEM	DESCRIPTION	PART NO.
53	CLIP-PANEL*LEFT	056433
54	GUIDE A.-DRIP PAN-LEFT	X59910
55	GUIDE A.-DRIP PAN-RIGHT	X59911
56	CONTROL A.	X59498-27
57	COVER-CONTROL BOX	062599
58	ACTUATOR-DRAW SWITCH	X62401
59	SWITCH A.-DUAL LEVER	X62400
60	LINE A.-DISCH.*LEFT-A/C	X66055
60a	VALVE-ACCESS-1/4 MFL X 3/8	053565
60b	SWITCH-PRESSURE 440 PSI	048230
61	LINE A.-DBV *LEFT	X63033-27
61a	VALVE-EXP-AUTO-1/4S X 1/4	046365
61b	VALVE-SOLENOID 7/64 ORF	043449-27
62	BLADE A.-AGITATOR	X56591

ITEM	DESCRIPTION	PART NO.
63	HOUSING A.-AGITATOR (INCLUDES ITEMS 63a - 63g)	X56586-03
63a	CAP-AGITATOR HOUSING	056589
63b	O-RING-1-3/8 OD X .070W	017395
63c	MAGNET A.-AGITATOR	X57341
63d	SCREW-4-40 X 1/4 SOC SS	600165
63e	PLATE-HOLDING-AGITATOR	056587
63f	MOTOR-AGITATOR-24VAC	050535-03
63g	BODY-AGITATOR HOUSING	056588
64	PROBE A.-MIX	X56912
65	SPACER-PROBE-MIX-UPPER	056910
66	PROBE-MIX OUT	056908
67	SPACER-PROBE-MIX-MIDDLE	056907
68	SPACER-PROBE-MIX	056985

Operator Parts (Model C717)

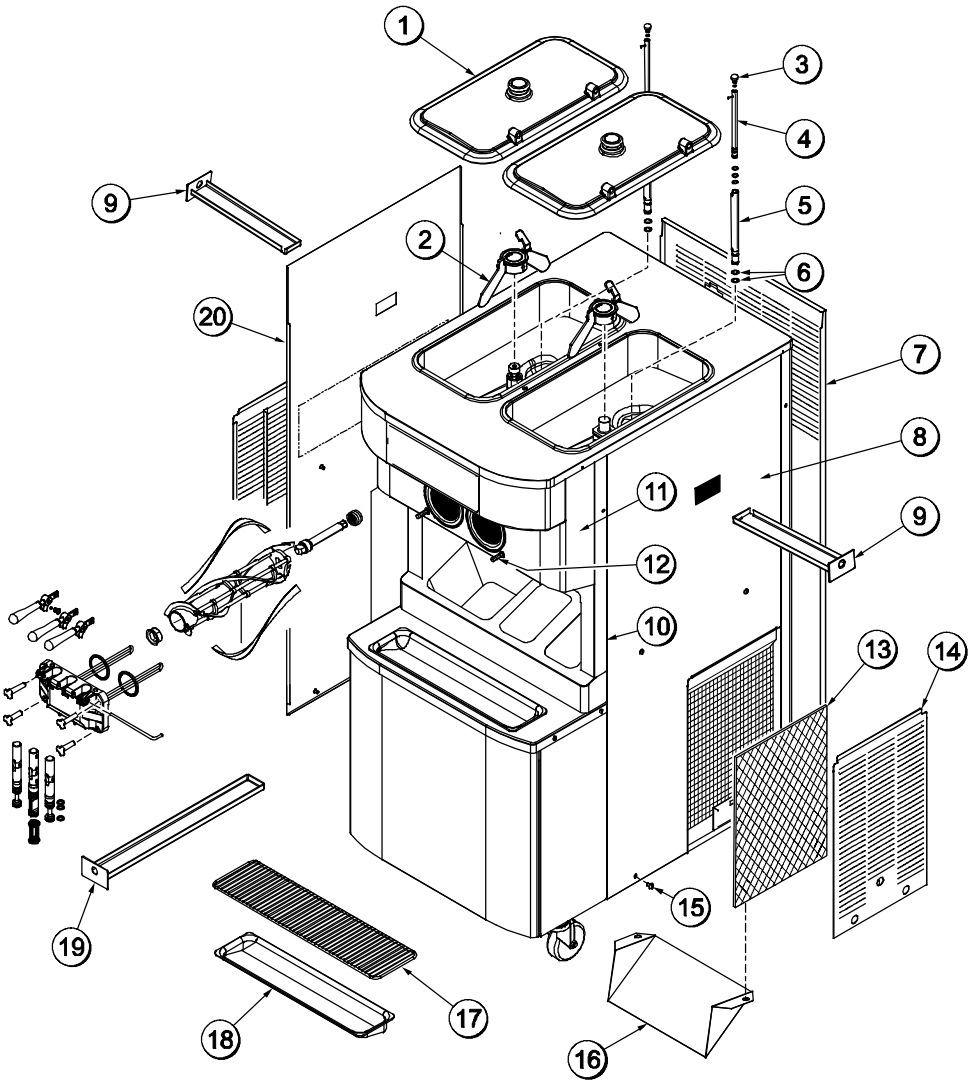
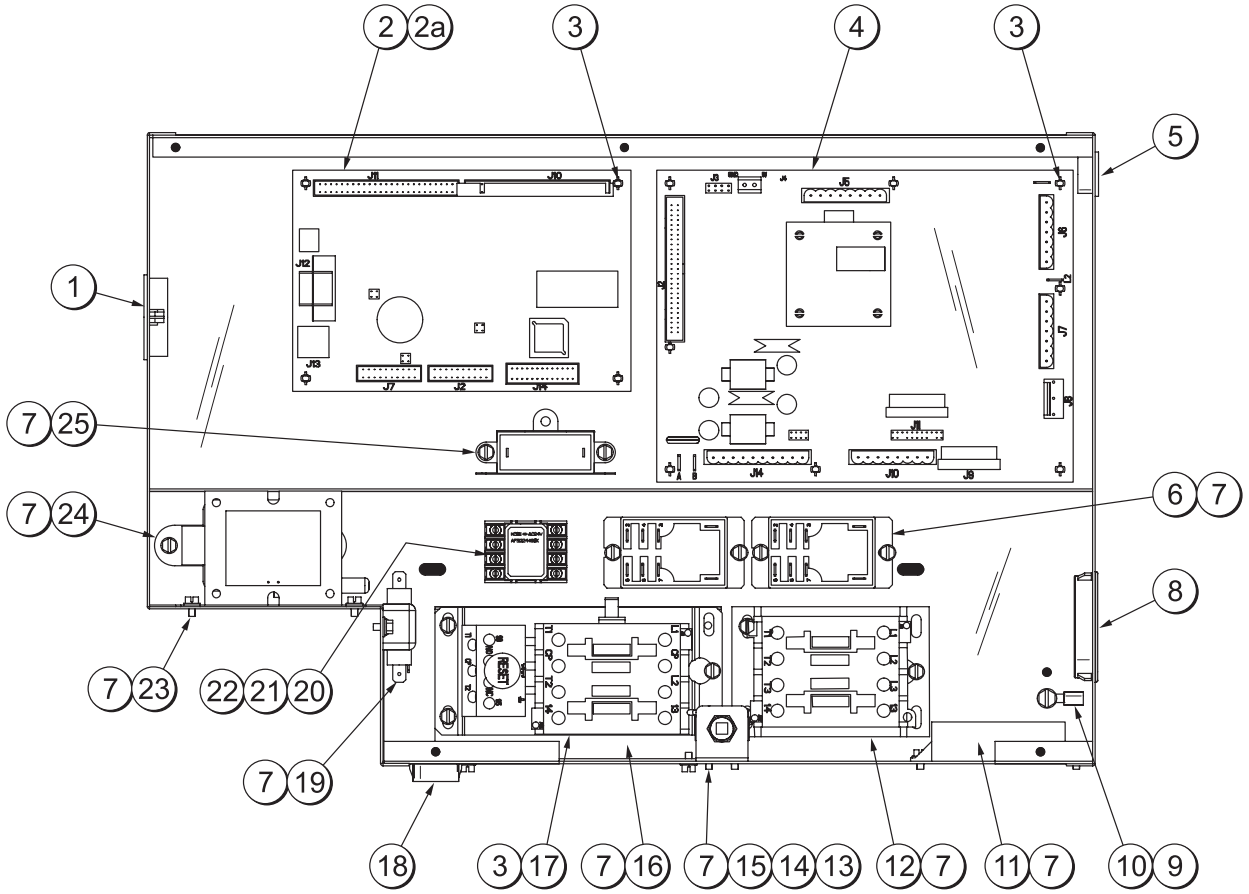


Figure 18

ITEM	DESCRIPTION	PART NO.
1	COVER-HOPPER	053809-1
2	BLADE A.-AGITATOR	X56591
3	ORIFICE	022465-100
4	TUBE A.-FEED-SC-INNER-3/16H	X32824-3
5	TUBE A.-FEED-OUTER-HT	X34641
6	O-RING-.643 OD X .077 W	018572
7	PANEL-REAR	059917
8	PANEL-SIDE*RIGHT	059907
9	PAN-DRIP 12.5	059736
10	PANEL A.-FRONT (MIDDLE)	X63879

ITEM	DESCRIPTION	PART NO.
11	PANEL A.-FRONT (UPPER)	X59836
12	STUD-NOSE CONE	055987
13	FILTER-AIR-POLY-FLO	052779-11
14	PANEL A.-FILTER-LOUVERED	X59928
15	SCREW-1/4-20 X 3/8 RHM-SS	011694
16	DEFLECTOR-BLOWER EXHAUS	059929
17	SHIELD-SPLASH-WIRE-19-3/4 L	033813
18	TRAY-DRIP-19-5/8 L X 4-7/8	033812
19	PAN-DRIP 19-1/2 LONG	035034
20	PANEL-SIDE-LEFT	059906

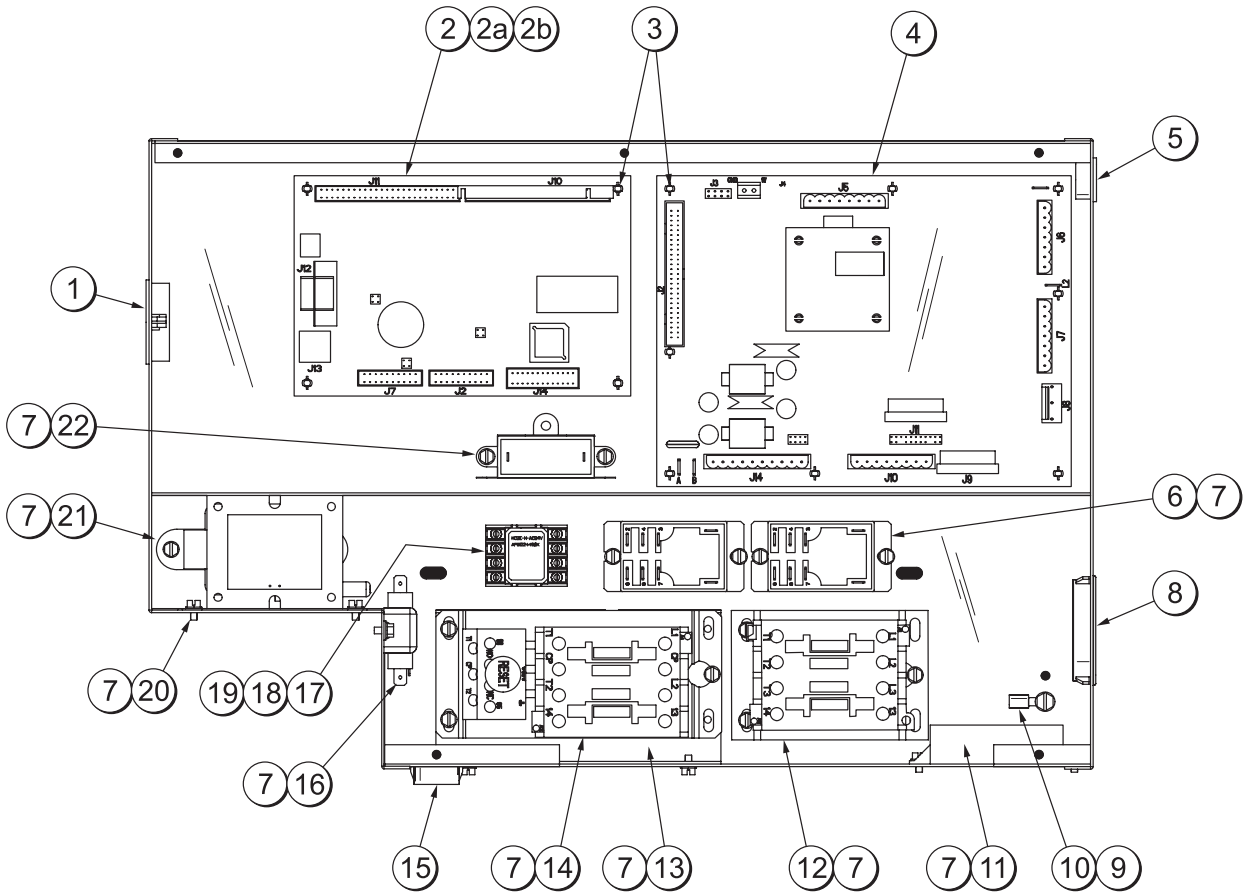
Control A. - X59239- (Model C708)



ITEM	DESCRIPTION	PART NO.
1	BUSHING-SNAP 1-5/16ID	017008
2	PCB A.-CONTROL	X59209-SER
2a	CHIP-SOFTWARE C708 UVC3	X40828
2b	CONTROL-UVC3 SURFACE MT	062529
3	STANDOFF-NYLON-SNAP-1/2L	053413
4	PCB A.-INTERFACE-HT-SS	X58505-SER
5	BUSHING-SNAP 5/8ID X 3/4OD	017462
6	RELAY-DPDT-24VAC-30A	054703-03
7	SCREW-8X1/4 SL HEX HD B	009894
8	BUSHING-SNAP 1-5/8ID X 2 OD	043637
9	SCREW-10X3/8TYPEB-HWH	015582
10	TERMINAL-RING #10 18-22WIR	023531
11	BLOCK-TERMINAL 2P .25 SPD	051644
12	RELAY-3 POLE-20A-208/240	012725-33

ITEM	DESCRIPTION	PART NO.
13	NUT-OVERLOAD RESET	045026
14	OVERLOAD-TI #2BM-20V9R	044464
15	BRACKET-PUMP OV-SGL	044465
16	BRACKET-CONTRACTOR MNT	056928
17	STARTER-1 PHASE-4.5 TO 7 A	041950-27K
18	BUSHING-SNAP 11/16 ID X 7/8	010548
19	FILTER-CORCOM 6EH1	040140-001
20	RELAY-DPDT 100UA TO 7A	052111-03
21	SOCKET-RELAY-FOR US W/052111	052112
22	SCREW-6X5/16 RD HD TYP B	013646
23	TRANS.-CONT.-32VA	054834
24	TRANS.-120/208/240V PRI 24V	051660
25	CAPACITOR-MOTOR-AGIT	057525

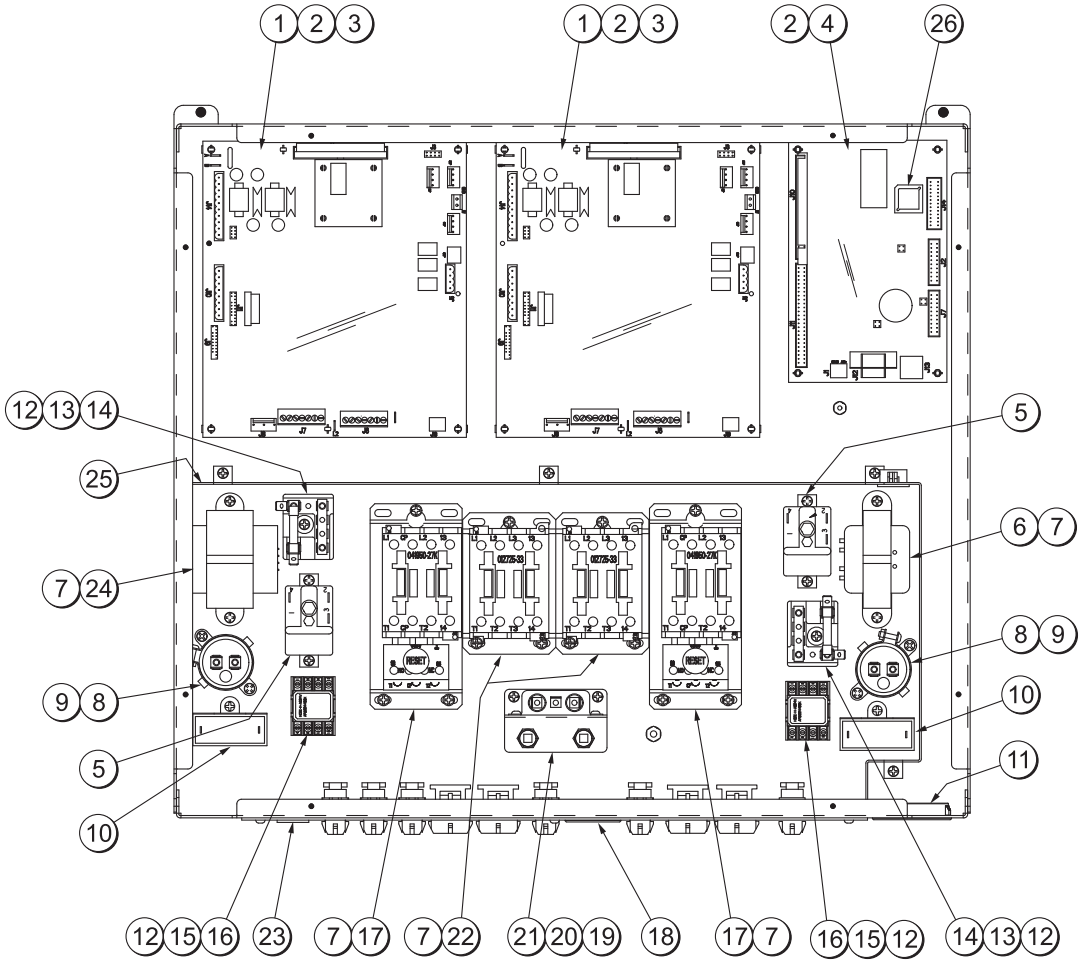
Control A. - X59240- (Model C709)



ITEM	DESCRIPTION	PART NO.
1	BUSHING-SNAP 1-5/16ID	017008
2	PCB A.-CONTROL *UVC3SM	X58891-SER
2a	CHIP-SOFTWARE C709 UVC3	X40883
2b	CONTROL-UVC3 SURFACE MT	062529
3	STANDOFF-NYLON-SNAP-1/2L	053413
4	PCB A.-INTERFACE-HT-SS	X58505-SER
5	BUSHING-SNAP 5/8ID X 3/4OD	017462
6	RELAY-DPDT-24VAC-30A@277	054703-03
7	SCREW-8X1/4 SL HEX HD	009894
8	BUSHING-SNAP 1-5/8ID X 2 OD	043637
9	SCREW-10 X 3/8 TYPE B-SERR	015582
10	TERMINAL-RING #10 18-22WIR	023531

ITEM	DESCRIPTION	PART NO.
11	BLOCK-TERMINAL 2P .25 SPD	051644
12	RELAY-3 POLE-20A-208/240	012725-33
13	BRACKET-CONTRACTOR MT	056928
14	STARTER-1 PHASE-4.5 TO 7 A	041950-27K
15	BUSHING-SNAP 11/16 ID X 7/8	010548
16	FILTER-CORCOM 6EH1	040140-001
17	RELAY-DPDT 100UA TO 7A 1/8	052111-03
18	SCREW-6X5/16 RD HD TYP B	013646
19	SOCKET-RELAY-FOR US	052112
20	TRANS.-CONT.-32VA 120/200/2	054834
21	TRANS.-120/208/240V PRI 24V	051660
22	CAPACITOR-MOTOR-AGITAT	057525

Control A. - X59497- (Model C716)

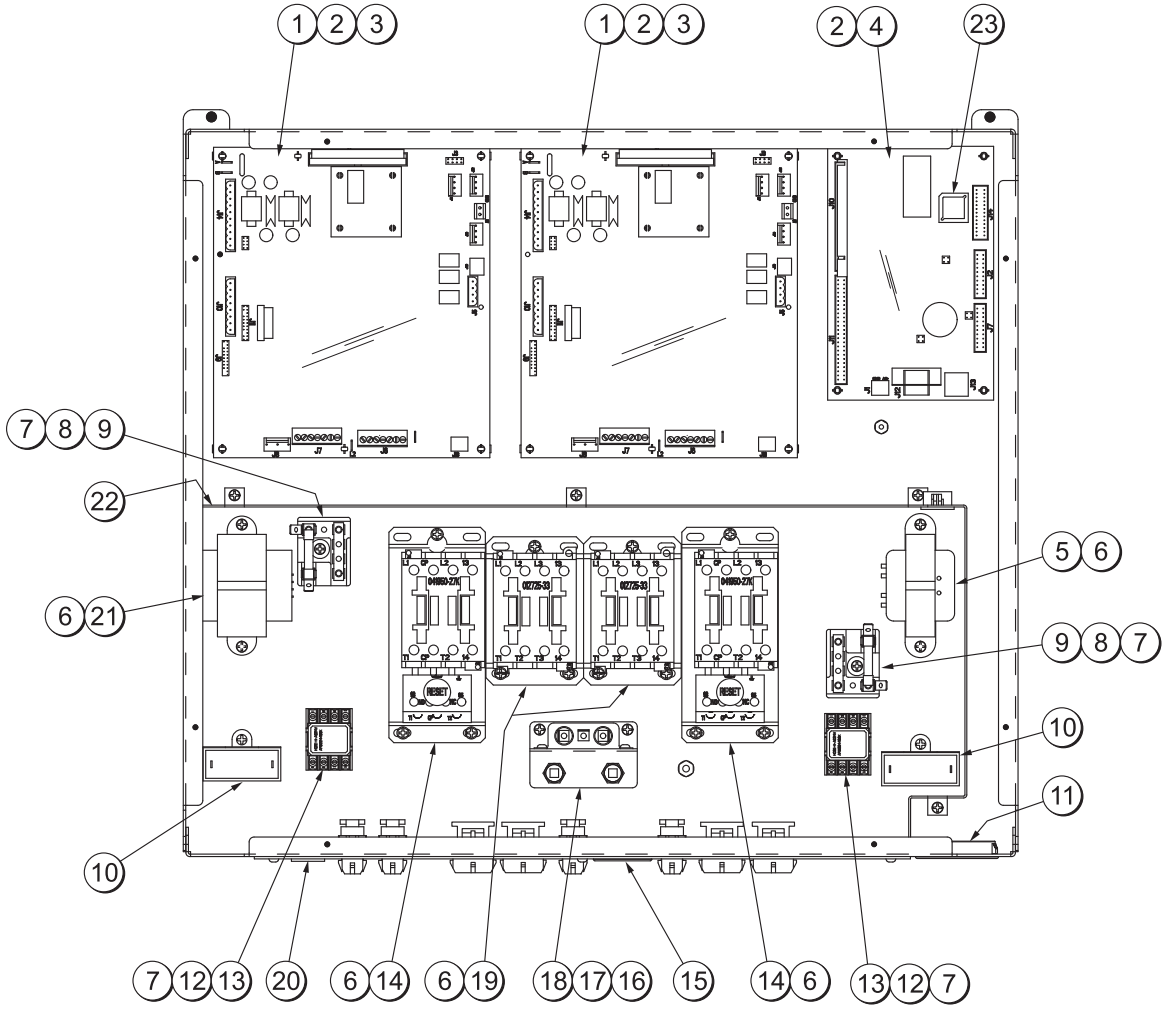


ITEM	DESCRIPTION	PART NO.
1	PCB A.-INTERFACE	X59435-SER
2	STANDOFF-NYLON-1/2L-SNAP	040280-007
3	SPACER-.5 LONG-SNAP MNT	062600
4	CONTROL-UVC3 SURFAC MT	059189-SER
5	RELAY-MTR START TI#4CR-1	039725-27
6	TRANS.-120/208/240V PRI 24V	051660
7	SCREW-8X1/4 SL HEX HD B	009894
8	CAPACITOR-START 47-56UF	037251-34
9	CLAMP-VERTICAL CAP-1-3/8	062570
10	CAPACITOR-MOTOR-AGITATR	057525
11	BUSHING-SNAP 1-5/8IDX2 OD	043637
12	SCREW-6X5/16 RD HD TYP B	013646
13	FUSE-15A 250 VAC CERAMIC	062352
14	BLOCK-TERMINAL AND FUSE	062351

ITEM	DESCRIPTION	PART NO.
15	SOCKET-RELAY-FOR US	052112
16	RELAY-DPDT 100UA TO 7A	052111-03
17	STARTER-1 PHASE-4.5 TO 7 A	041950-27K
18	BUSHING-SNAP 15/16 ID	023396
19	NUT-OVERLOAD RESET	045026
20	FILTER-CORCOM 6EH1	040140-001
21	OVERLOAD-TI #2BM-20V9R	044464
22	RELAY-3 POLE-20A-208/240	012725-33
23	BUSHING-SNAP 5/8ID X 3/4	017462
24	TRANS.-CONT.-32VA 120/200/	054834
25	BARRIER-SHIELD	062601
26	CHIP-SOFTWARE C716 UVC	X40890
*27	COVER-CONTROL BOX	062599

*NOT SHOWN

Control A. - X59498- (Model C717)



ITEM	DESCRIPTION	PART NO.
1	PCB A.-INTERFACE	X59435-SER
2	STANDOFF-NYLON-SNAP-1/2L	053413
3	SPACER-.5 LONG-SNAP MNT	062600
4	CONTROL-UVC3 SURFAC MT	062529-SER
5	TRANS.-120/208/240V PRI 24V	051660
6	SCREW-8X1/4 SL HEX HD B	009894
7	SCREW-6X5/16 RD HD TYP B	013646
8	FUSE-15A 250 VAC CERAMIC	062352
9	BLOCK-TERMINAL AND FUSE	062351
10	CAPACITOR-MOTOR-AGITATR	057525
11	BUSHING-SNAP 1-5/8ID X 2	043637
12	SOCKET-RELAY-FOR US	052112
13	RELAY-DPDT 100UA TO 7A 1/8	052111-03

ITEM	DESCRIPTION	PART NO.
14	STARTER-1 PHASE-4.5 TO 7 A	041950-27K
15	BUSHING-SNAP 15/16 ID	023396
16	NUT-OVERLOAD RESET	045026
17	FILTER-CORCOM 6EH1	040140-001
18	OVERLOAD-TI #2BM-20V9R	044464
19	RELAY-3 POLE-20A-208/240	012725-33
20	BUSHING-SNAP 5/8ID X 3/4OD-B	017462
21	TRANS.-CONT.-32VA 120/200/24	054834
22	BARRIER-SHIELD	062601
23	CHIP SOFTWARE C716 UVC3	X40890
*24	COVER-CONTROL BOX	062599

*NOT SHOWN

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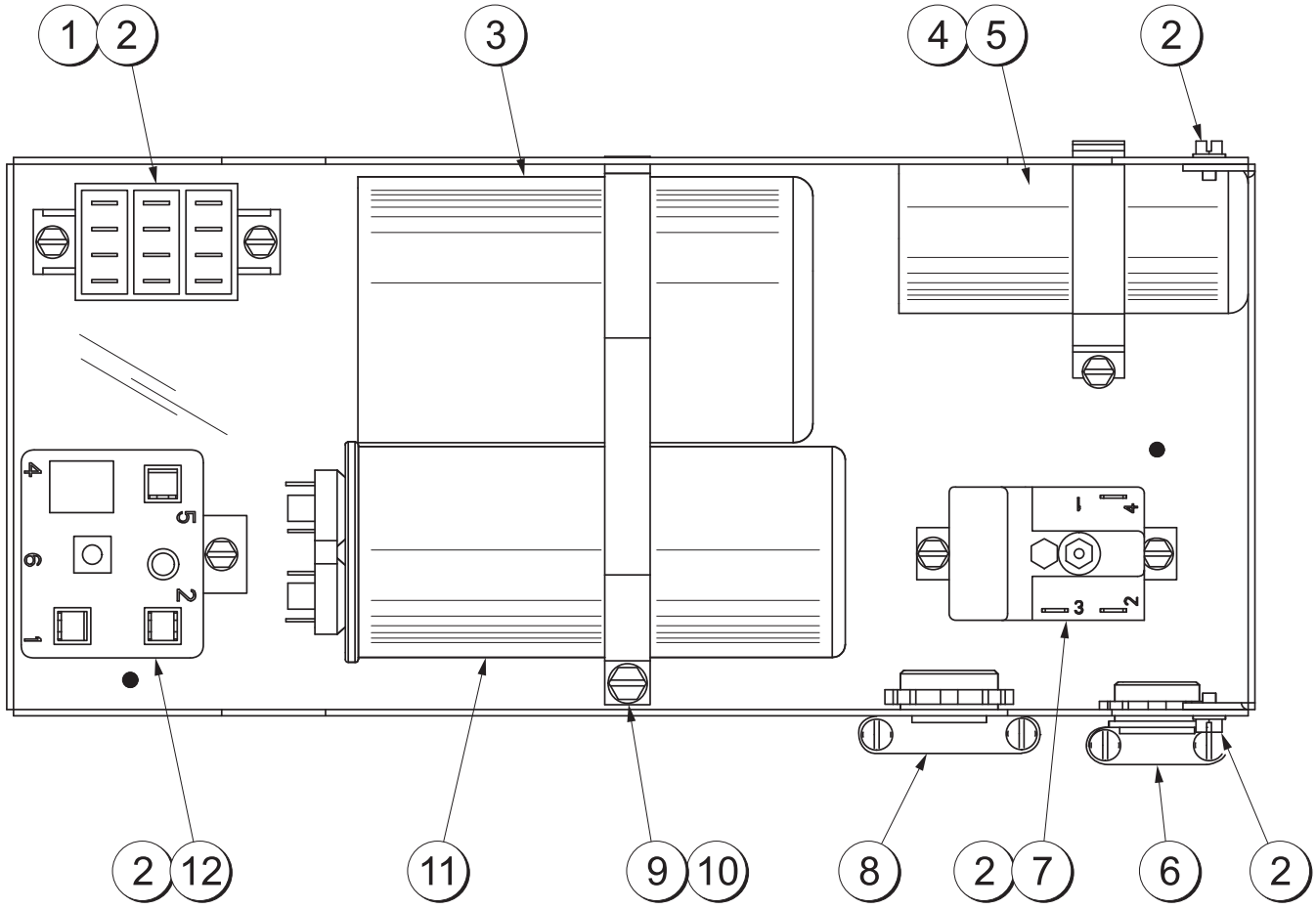
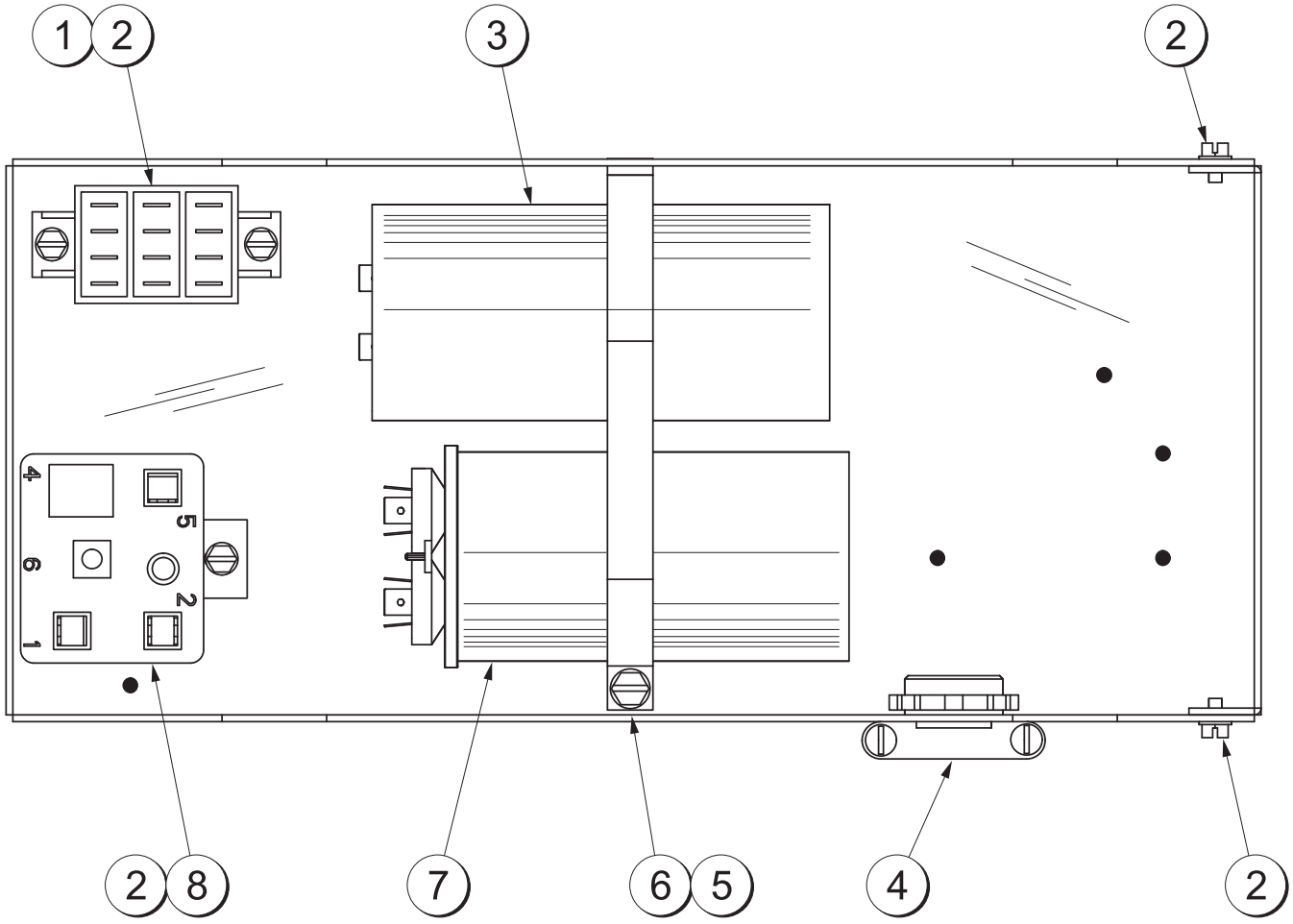
Box A.-Cap & Relay - X56931-27 (Model C708)



ITEM	DESCRIPTION	PART NO.
1	BLOCK-TERMINAL 3P 20A, 300V	051331
2	SCREW-8X1/4 SL HEX HD B	009894
3	CAPACITOR-START 189-227UF/33	033044-1
4	CAPACITOR-START 47-56UF/220T	037251-34
5	STRAP-CAPACITOR 3-1/16 IN.	036953
6	CONNECTOR-BX 3/8 STR	014569

ITEM	DESCRIPTION	PART NO.
7	RELAY-MTR START TI#4CR-1-625	039725-27
8	CONNECTOR-BX 3/4 STR-	031231
9	SCREW-10X3/8TYPEB-HWH	015582
10	STRAP-CAPACITOR 7-11/32	037890
11	CAPACITOR-RUN 40MF/440V	036049
12	RELAY-START-COMPRESSOR	052401-27

Box A.-Cap & Relay - X58849-27 (Model C709)



ITEM	DESCRIPTION	PART NO.
1	BLOCK-TERMNL 3P 20A, 300V	051331
2	SCREW-8X1/4 SL HEX HD B	009894
3	CAPACITOR-START 189-227UF/330V	033044-1
4	CONNECTOR-BX 3/4 STR-2 SC	031231

ITEM	DESCRIPTION	PART NO.
5	STRAP-CAPACITOR 7-11/32	037890
6	SCREW-10X3/8TYPEB-HWH	015582
7	CAPACITOR-RUN 35UF/440V	048132
8	RELAY-START-COMPRESSOR	062363

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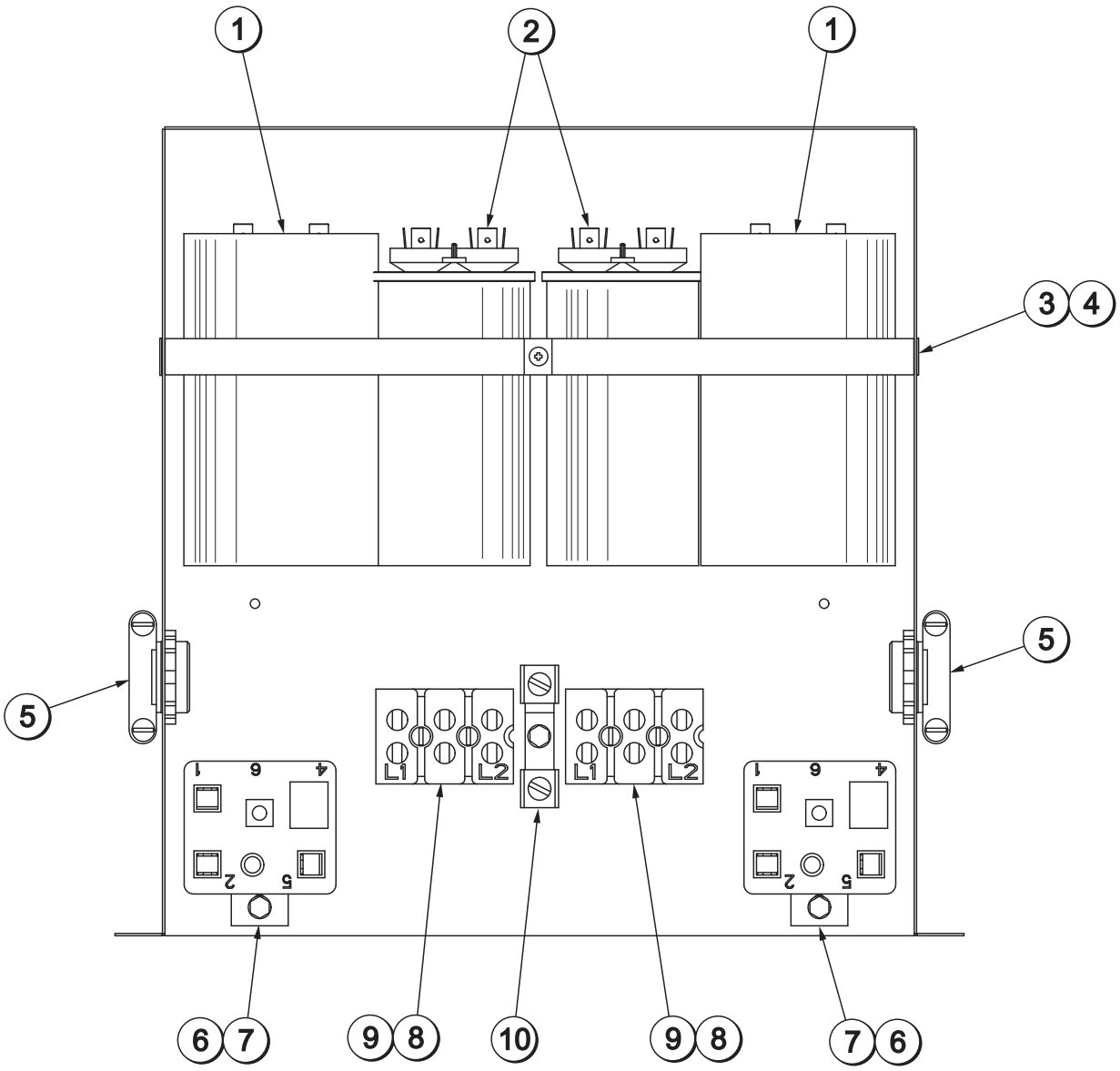
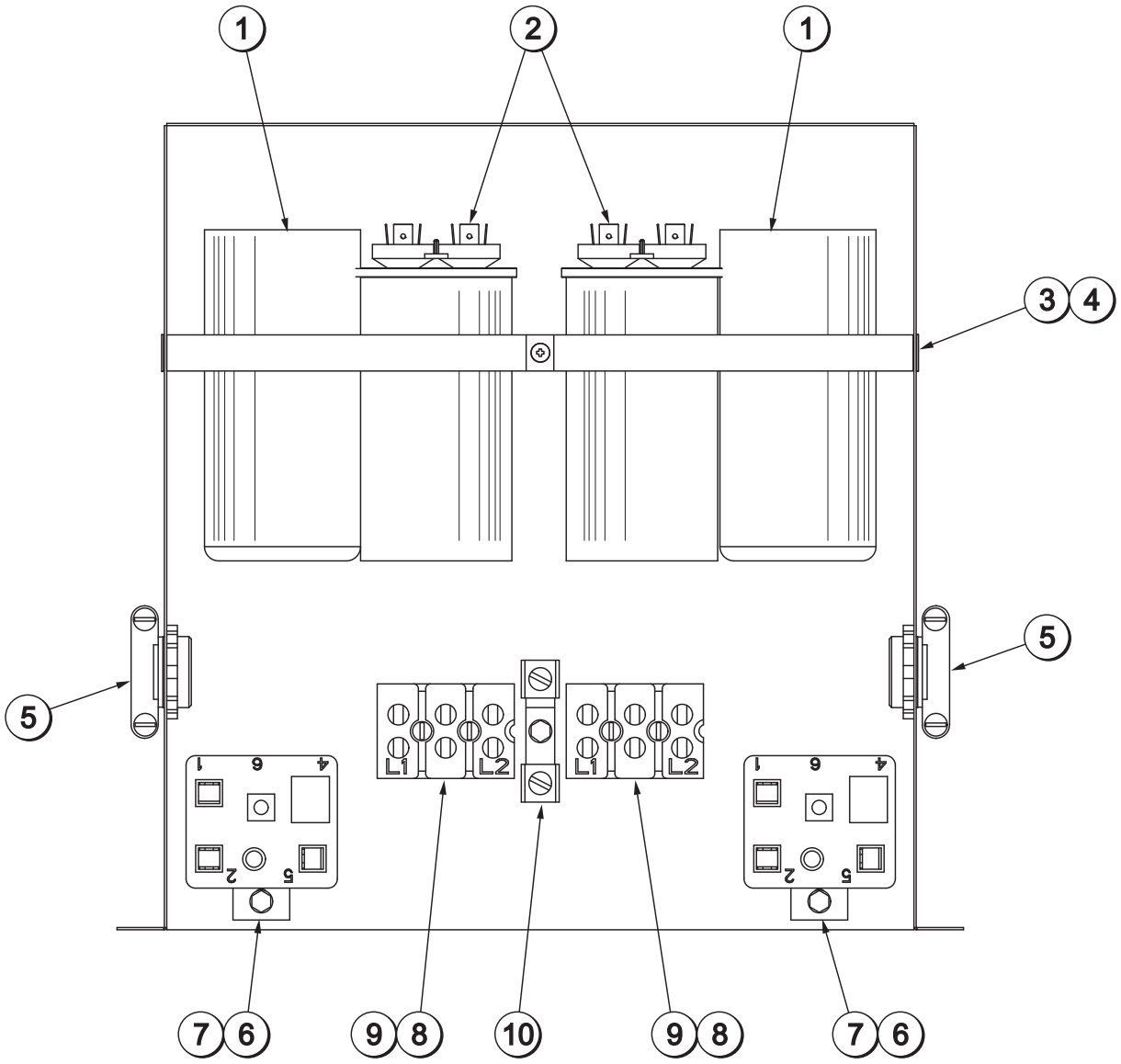
Box A.-Cap & Relay - X59499-27 (Model C716)



ITEM	DESCRIPTION	PART NO.
1	CAPACITOR-START 189-227UF/33	033044-1
2	CAPACITOR-RUN 40MF/440V	036049
3	STRAP-CAPACITOR 7-11/32	037890
4	SCREW-6-32X5/8 TAPTITE PAN	041250
5	CONNECTOR-BX 3/4 STR-2 SCREW	031231

ITEM	DESCRIPTION	PART NO.
6	SCREW-8-32X3/8 TAPTITE-HEX	041951
7	RELAY-START-COMPRESSOR	052401-27
8	SCREW-6-32X1-1/4 RD HD	017310
9	BLOCK-TERMINAL 2P L1,L2	039422
10	LUG-GROUNDING 4-14GA WIRE	017667

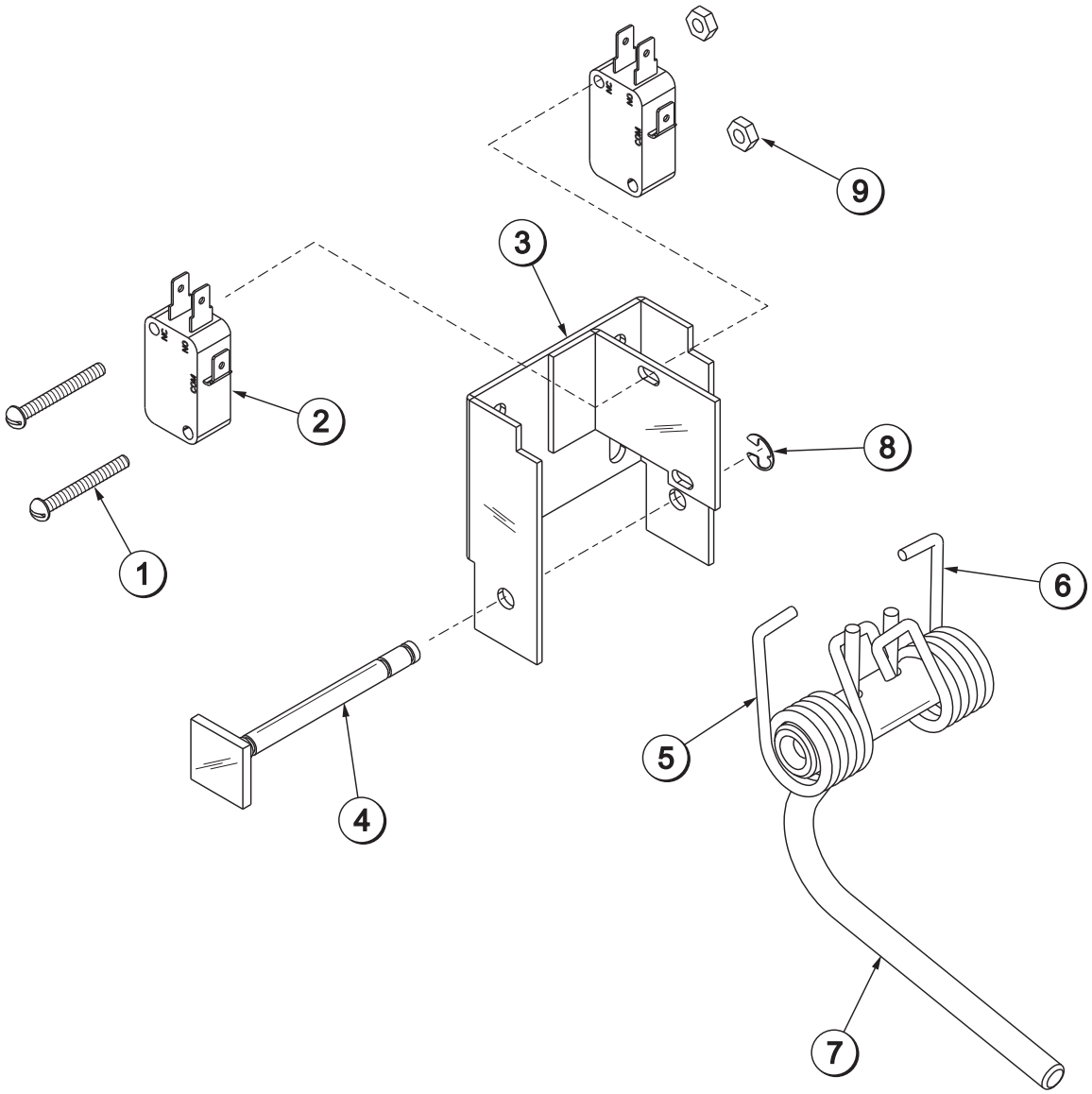
Box A.-Cap & Relay - X59500-27 (Model C717)



ITEM	DESCRIPTION	PART NO.
1	CAPACITOR-START 189-227UF/25	053106
2	CAPACITOR-RUN 35UF/440V	048132
3	STRAP-CAPACITOR 7-11/32	037890
4	SCREW-6-32X5/8 TAPTITE PAN	041250
5	CONNECTOR-BX 3/4 STR-2 SCREW	031231

ITEM	DESCRIPTION	PART NO.
6	SCREW-8-32X3/8 TAPTITE-HEX	041951
7	RELAY-START-COMPRESSOR	051957-27
8	SCREW-6-32X1-1/4 RD HD	017310
9	BLOCK-TERMINAL 2P L1,L2	039422
10	LUG-GROUNDING 4-14GA WIRE	017667

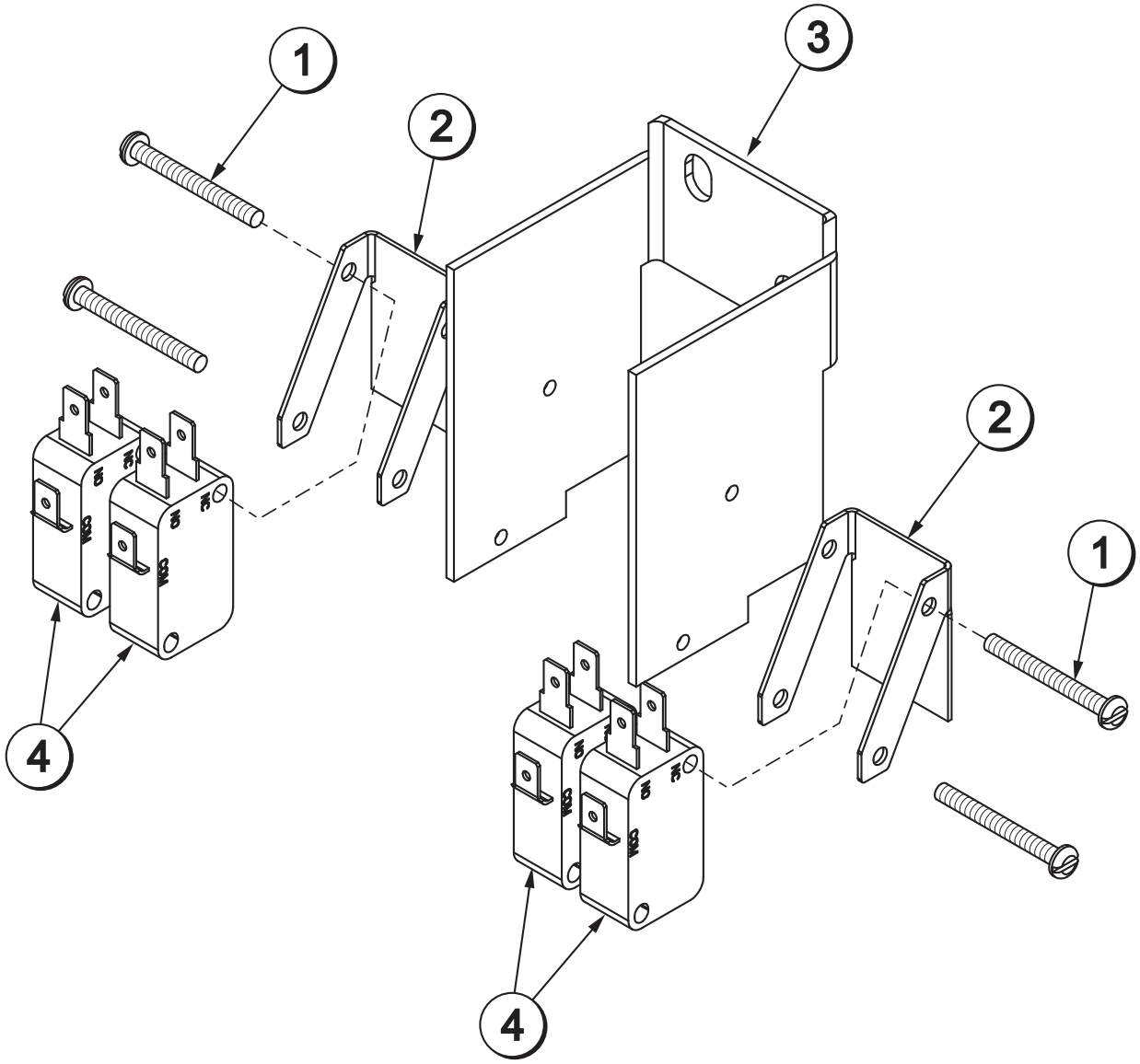
Switch A.-Draw - X56147 (C708/C709)



ITEM	DESCRIPTION	PART NO.
1	SCREW-4-40X1 RD HD STEEL	028890
2	SWITCH-LEVER-SPDT-10A-125	028889
3	BRACKET A.-SWITCH	X56254
4	PIN-PIVOT	015478
5	SPRING-RETURN-RIGHT	041661

ITEM	DESCRIPTION	PART NO.
6	SPRING-RETURN-LEFT-	041660
7	ARM A.-DRAW	X56253
8	E-RING 3/16 .335 O.D.	049178
9	NUT-4-40 HEX -PLATED	038623

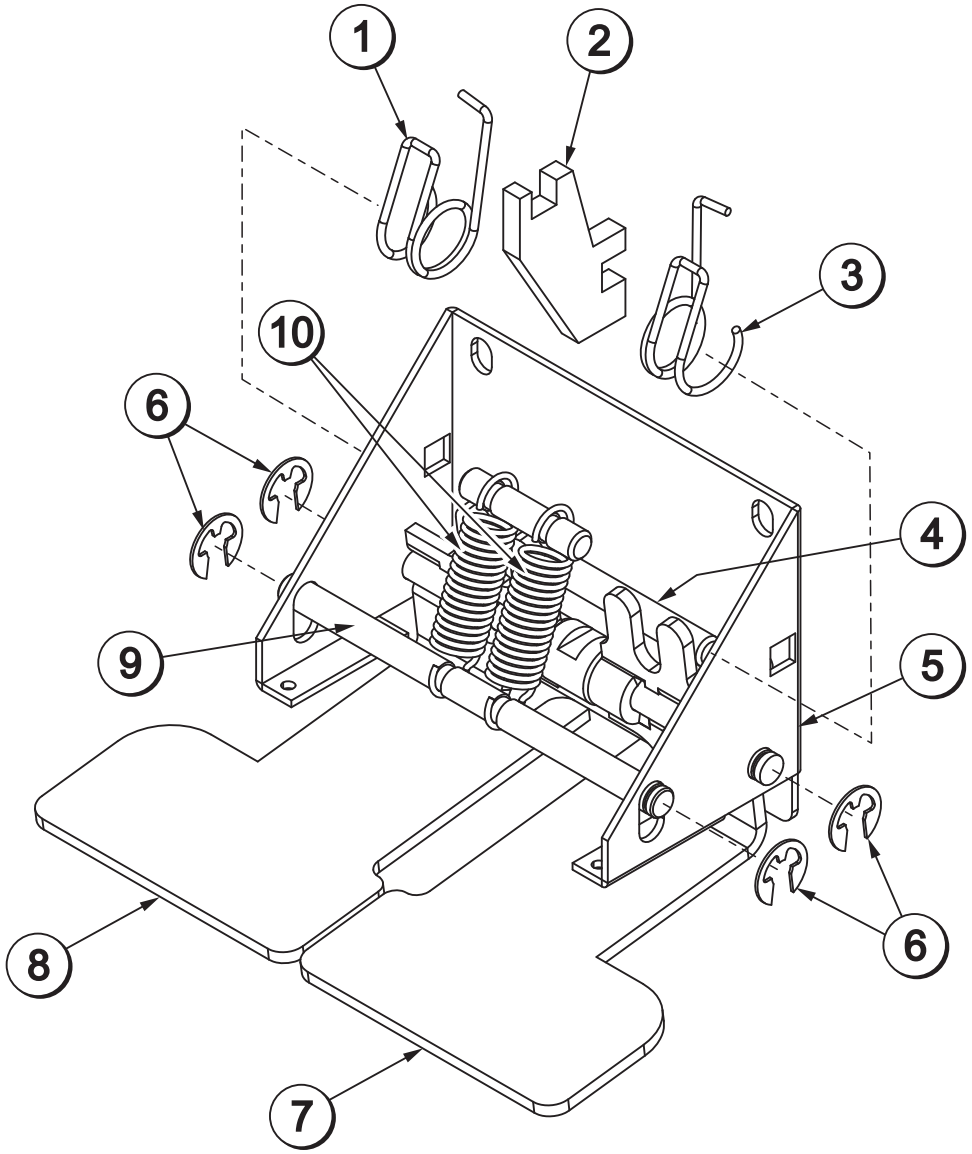
Switch A.-Dual Lever - X62400 (C716/C717)



ITEM	DESCRIPTION	PART NO.
1	SCREW-4-40X1" TAPTITE PAN	045141
2	ACTUATOR-TANDEM LEAF	062408

ITEM	DESCRIPTION	PART NO.
3	BRACKET-SWITCH	062394
4	SWITCH-LEVER-SPDT-10A-125	028889

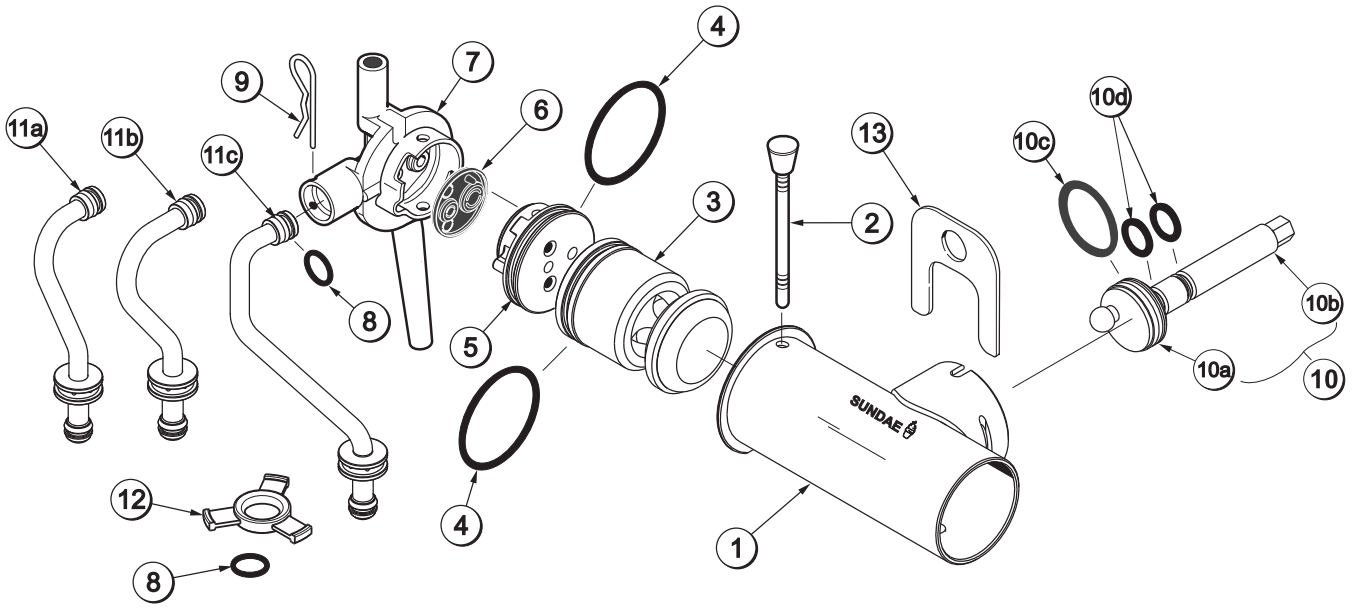
Actuator A.-Draw Switch - X62401 (C716/C717)



ITEM	DESCRIPTION	PART NO.
1	SPRING-RETURN-LEFT-TWIN TWIST	038923
2	BRACKET A.-SPRING RETURN	X38257
3	SPRING-RETURN-RIGHT-TWIN TWIST	038924
4	PIN-PIVOT-DRAW SWITCH	038484
5	BRACKET-SWITCH	038253

ITEM	DESCRIPTION	PART NO.
6	E-RING 1/4	032190
7	ARM-SWITCH-DRAW-R	038650
8	ARM-SWITCH-DRAW-L	038649
9	ROD-SPRING RETAINER	038254
10	SPRING-EXTENSION.375X.045	038922

Pump A.-Mix Simplified - X57029- (C708/C716)

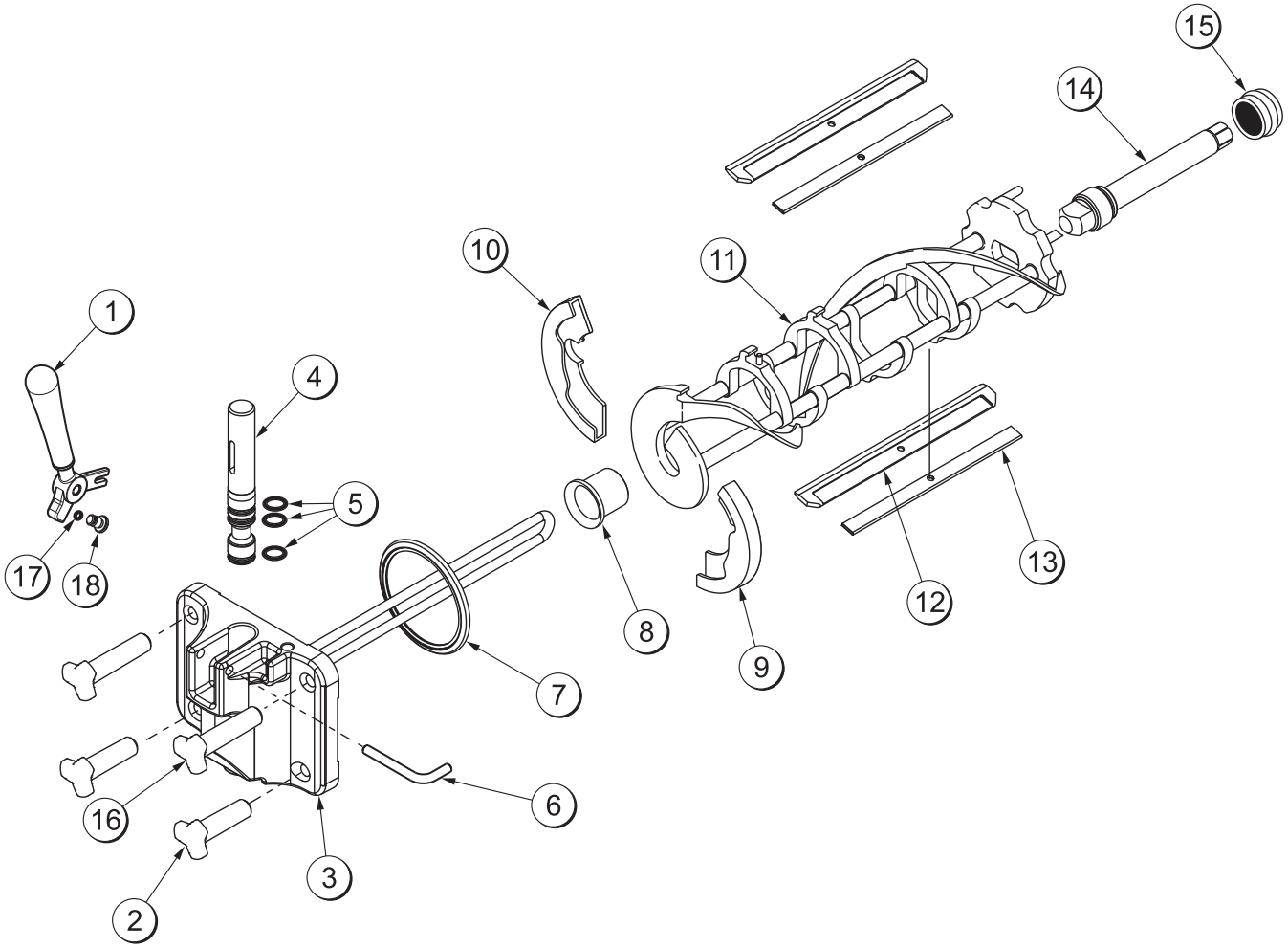


ITEM	DESCRIPTION	PART NO.
1 - 7	**PUMP ASSEMBLY - MIX SIMPLIFIED SOFT SERVE**	**X57029-XX***
1	CYLINDER-PUMP-HOPPER-SS	057943
2	PIN A.-RETAINING	X55450
3	PISTON	053526
4	O-RING 2-1/8" OD - RED	020051
5	CAP-VALVE	056874-XX
6	GASKET-SIMPLIFIED PUMP VALVE	053527
7	ADAPTOR - MIX INLET SS RED	054825
8	O-RING - 11/16 OD - RED	016132
9	PIN - COTTER	044731
10	SHAFT A.-DRIVE-MIX PUMP-HOPPER	X41947

ITEM	DESCRIPTION	PART NO.
10a	CRANK-DRIVE	039235
10b	SHAFT-DRIVE	041948
10c	O-RING - DRIVE SHAFT	048632
10d	O-RING 1-3/4	008904
11a	TUBE A.-FEED HOPPER (C708)	X56521
11b	TUBE A.-FEED RIGHT (C716)	X59809
11c	TUBE A.-FEED LEFT (C716)	X59808
12	RING-CHECK .120 OD	056524
13	CLIP-MIX PUMP RETAINER	044641

***NOTE:** THE STANDARD PUMP X57029-XX IS -14. OVERRUN CAN BE CHANGED HIGHER OR LOWER BY SUBSTITUTING THE CAP (056874-XX) WITH CAPS AVAILABLE -1 THROUGH -20. THE HIGHER THE DASH (-) NUMBER, THE HIGHER THE OVERRUN.

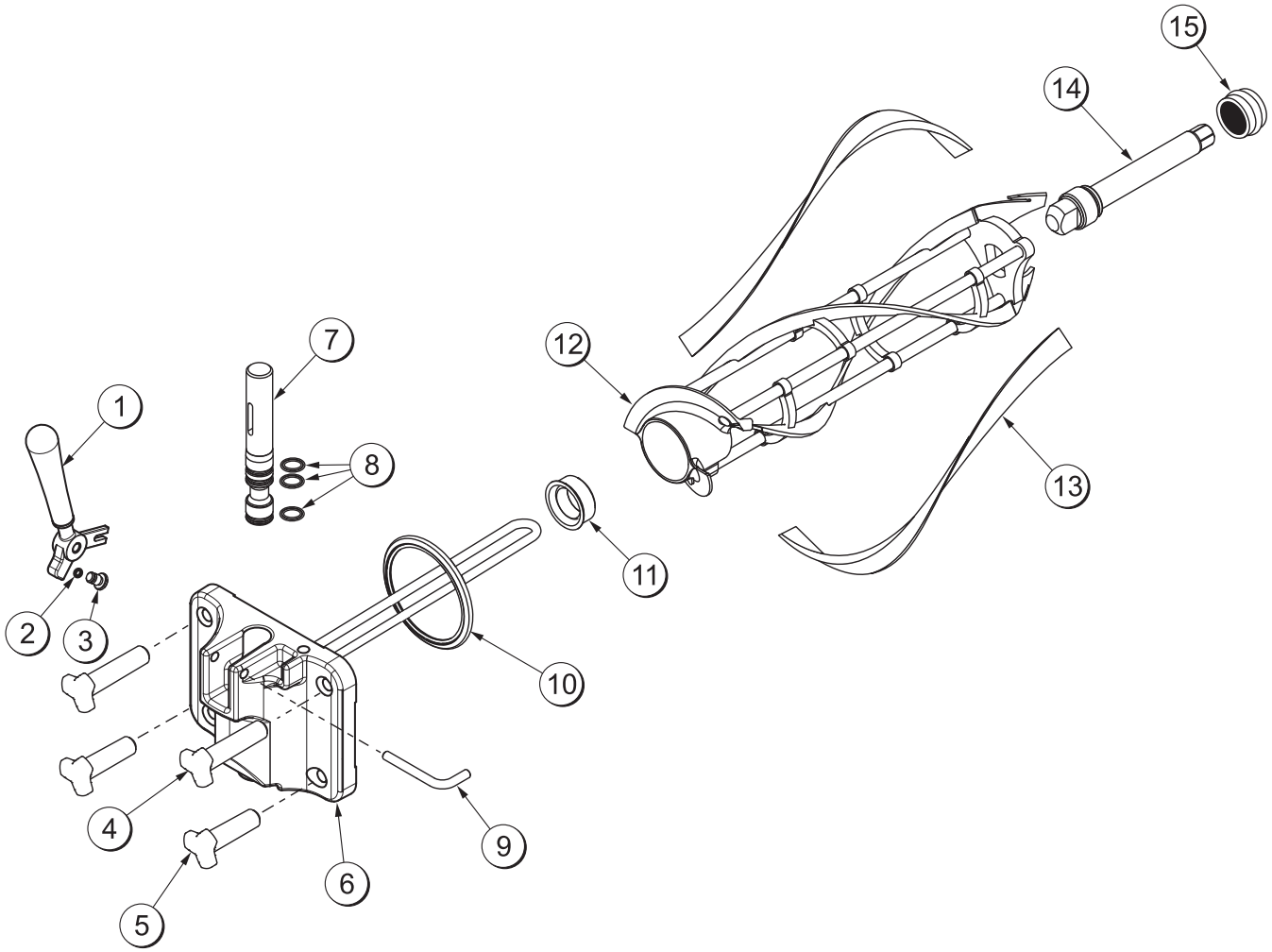
Door and Beater Assembly (Model C708)



ITEM	DESCRIPTION	PART NO.
1	HANDLE A.-DRAW-WELDED	X56246
2	NUT-STUD SHORT (2)	058764
3	DOOR A.-W/BAFFLE	X57332-SER
4	VALVE A.-DRAW	X55820
5	O-RING-DRAW VALVE-S.S.	014402
6	PIN-HANDLE-SS	055819
7	GASKET-DOOR HT 4”-DBL	048926
8	BEARING-FRONT-SHOE	050348
9	SHOE-FRONT HELIX *REAR*	050346

ITEM	DESCRIPTION	PART NO.
10	SHOE-FRONT HELIX *FRONT*	050347
11	BEATER A.-3.4QT-1 PIN	X46231
12	BLADE-SCRAPER-PLASTIC	046235
13	CLIP-SCRAPER BLADE 7.00	046236
14	SHAFT-BEATER	056078
15	SEAL-DRIVE SHAFT	032560
16	NUT–STUD*LONG (2)	058765
17	O-RING-1/4 OD X .070W 50	015872
18	SCREW-ADJUSTMT-5/16-24	056332

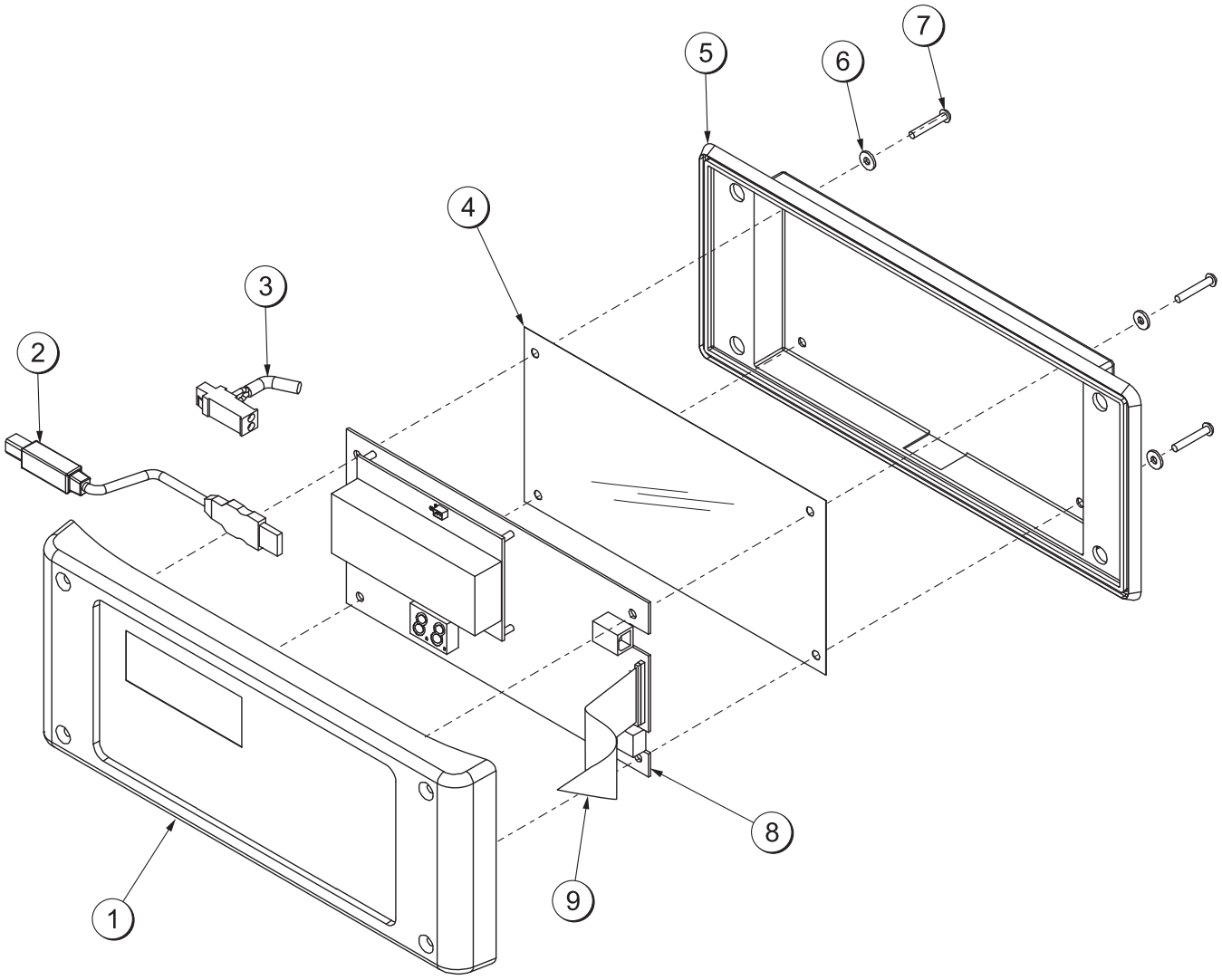
Door and Beater Assembly (Model C709)



ITEM	DESCRIPTION	PART NO.
1	HANDLE A.-DRAW-WELDED	X56246
2	O-RING-1/4 OD X .070W 50	015872
3	SCREW-ADJUSTMT-5/16-24	056332
4	NUT-STUD BLACK 3.250”	058765
5	NUT-STUD BLACK 2.563“	058764
6	DOOR A.-W/BAFFLE	X57332-SER
7	VALVE A.-DRAW	X55820
8	O-RING-DRAW VALVE-S.S.	014402

ITEM	DESCRIPTION	PART NO.
9	PIN-HANDLE-SS	055819
10	GASKET-DOOR HT 4”-DBL	048926
11	BEARING-FRONT	050216
12	BEATER A.-3.4 QT HELICORE	X31761
13	BLADE-SCRAPER-PLASTIC	035174
14	SHAFT-BEATER	056078
15	SEAL-DRIVE SHAFT	032560

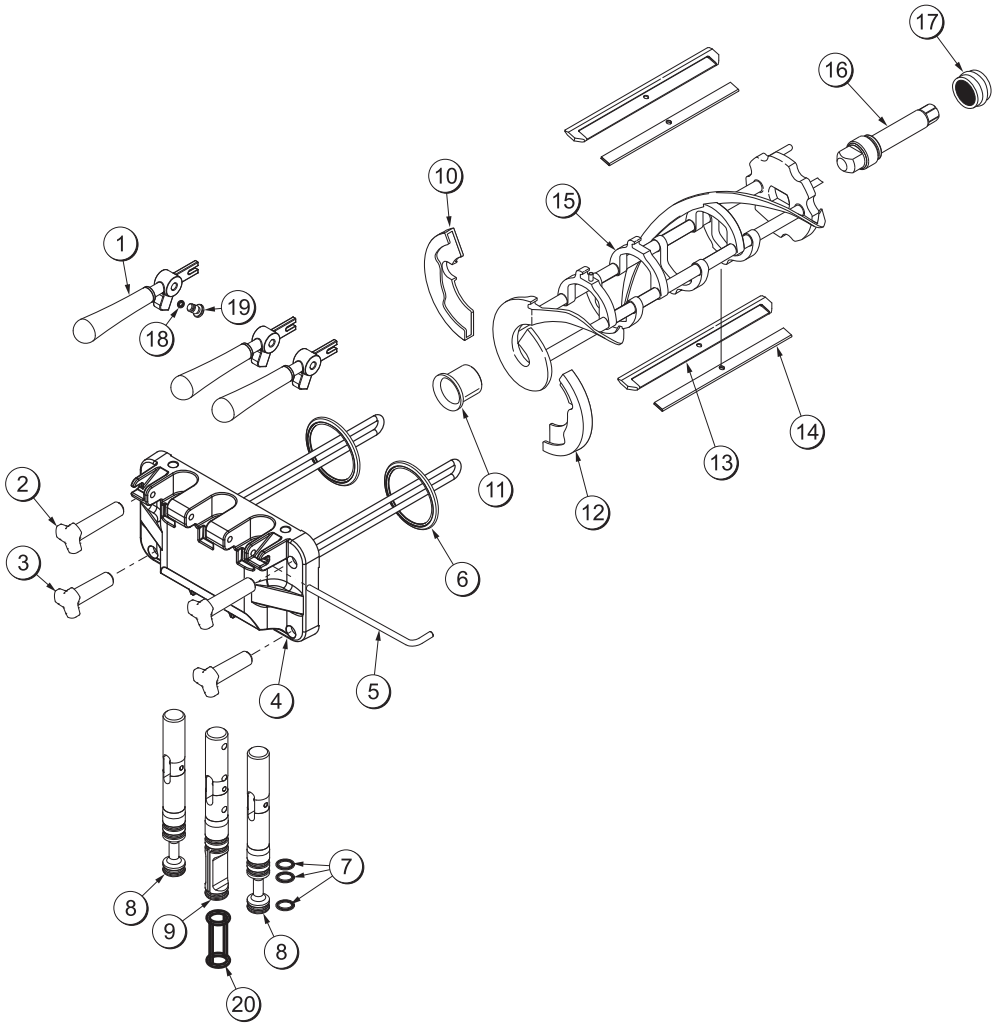
Plate A.-Dec - X56959 (C708) / X58860 (C709)



ITEM	DESCRIPTION	PART NO.
1	PLATE-DEC (MODEL C708)	056958
	PLATE-DEC (MODEL C709)	058859
2	CABLE-USB	056785
3	HARNESS-WIRE-5V SHIELDED	057729
4	INSULATOR-PCB-INTERFACE	057798

ITEM	DESCRIPTION	PART NO.
5	GASKET-DEC PLATE	056991
6	WASHER-#6 FLAT STNLS	023546
7	SCREW-6-32X7/8 RHM	007017
8	PCB A.-INTERFACE	X58505-SER
9	CABLE-RIBBON-14C-14”L SIP	040040-015

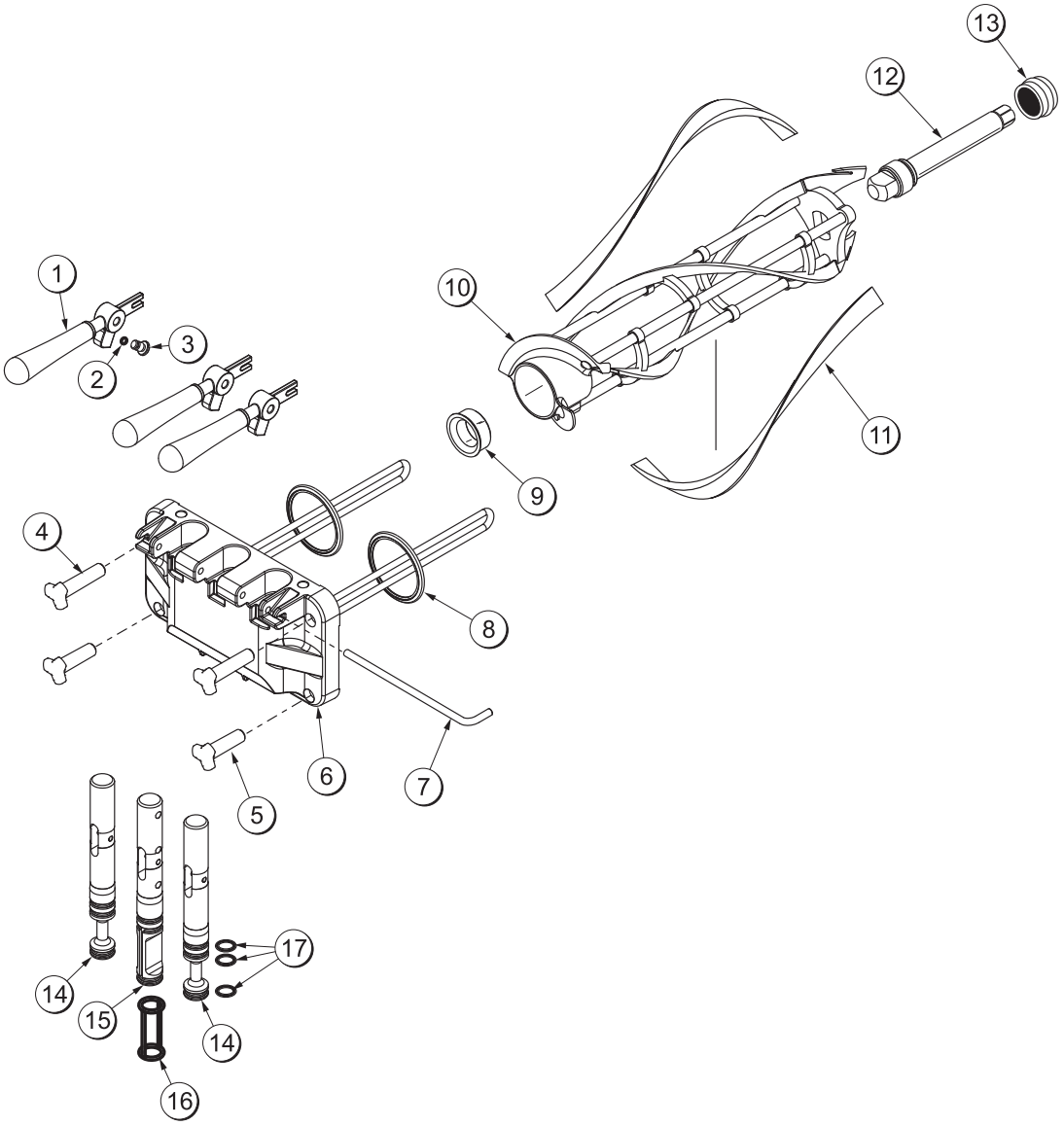
Door and Beater Assembly (Model C716)



ITEM	DESCRIPTION	PART NO.
1	HANDLE A.-DRAW-WELDED	X56421-1
2	NUT-STUD-BLACK 3.250 LONG	058765
3	NUT-STUD*BLACK 2.563 LONG	058764
4	DOOR A.-3SPT*HT*LG BAF	X59923-SER
5	PIN-HANDLE-TWIN	059894
6	GASKET-DOOR HT 4”-DOUBLE	048926-1
7	O-RING--7/8 OD X .103W	014402
8	VALVE A.-DRAW	X59888
9	VALVE A.-DRAW*CENTER	X59890
10	SHOE-FRONT HELIX *FRONT*	050347

ITEM	DESCRIPTION	PART NO.
11	BEARING-FRONT-SHOE	050348
12	SHOE-FRONT HELIX *REAR*	050346
13	BLADE-SCRAPER-PLAS 8-1/8L	046235
14	CLIP-SCRAPER BLADE 7.00”	046236
15	BEATER A.-3.4QT-1 PIN	X46231
16	SHAFT-BEATER	032564
17	SEAL-DRIVE SHAFT	032560
18	O-RING-1/4 OD X .070W 50	015872
19	SCREW-ADJUSTMENT-5/16-24	056332
20	SEAL-DRAW VALVE H-RING	034698

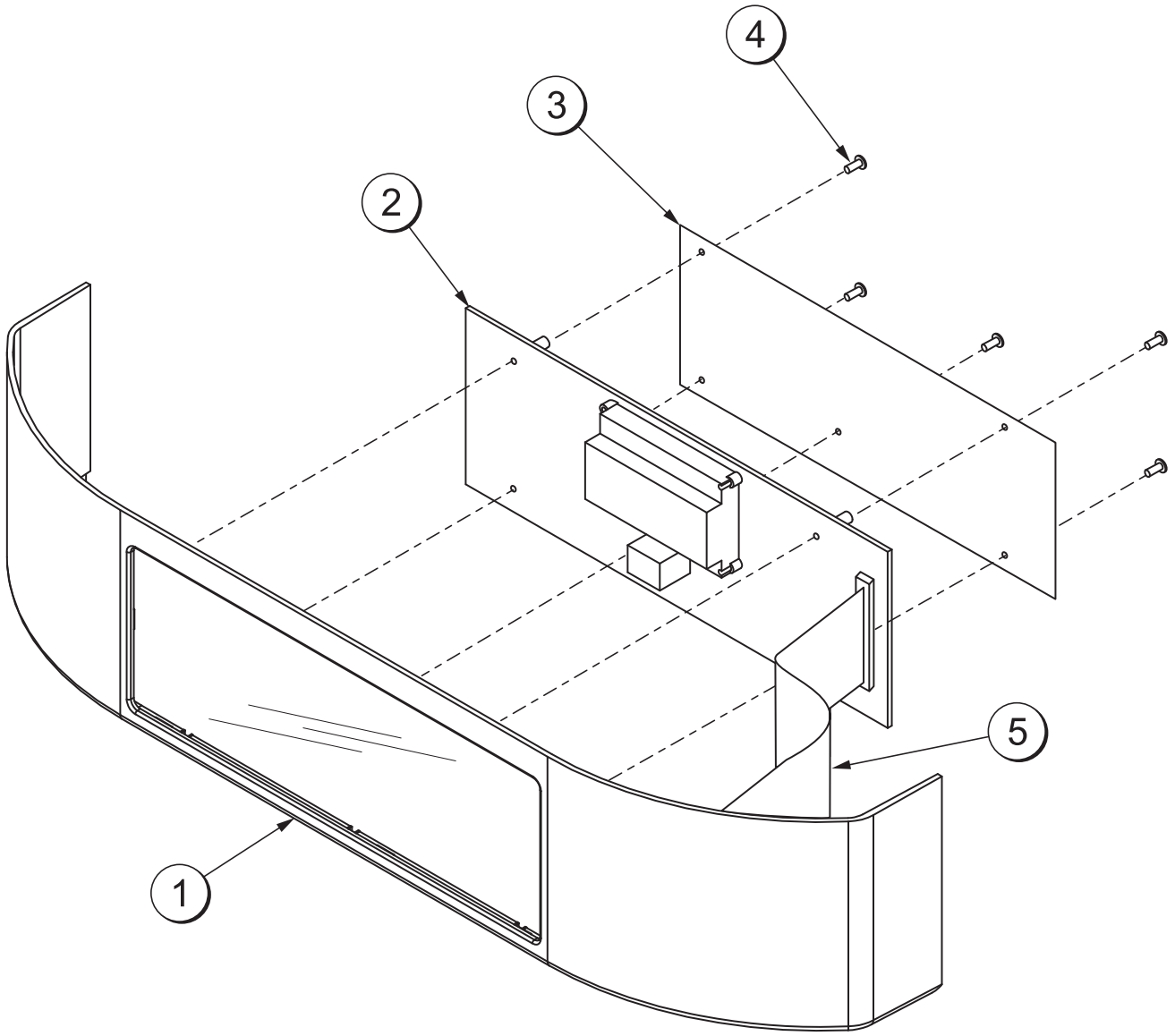
Door and Beater Assembly (Model C717)



ITEM	DESCRIPTION	PART NO.
1	HANDLE A.-DRAW-WELDED	X56421-1
2	O-RING-1/4 OD X .070W 50	015872
3	SCREW-ADJUSTMENT-5/16-24	056332
4	NUT-STUD BLACK 3.250 LONG	058765
5	NUT-STUD BLACK 2.563 LONG	058764
6	DOOR A.-*LG BAF*W/O PRG	X59924-SER
7	PIN-HANDLE-TWIN	059894
8	GASKET-DOOR HT 4”-DOUBLE	048926-1
9	BEARING-FRONT	050216

ITEM	DESCRIPTION	PART NO.
10	BEATER A.-3.4QT-HELICORE	X31761
11	BLADE-SCRAPER-PLASTIC 17	035174
12	SHAFT-BEATER	032564
13	SEAL-DRIVE SHAFT	032560
14	VALVE A.-DRAW-L&R	X59888
15	VALVE A.-DRAW-CENTER	X59890
16	SEAL-DRAW VALVE	034698
17	O-RING-7/8 OD X .103W	014402

Plate A.-Dec - X62127 (C716) / X62128 (C717)

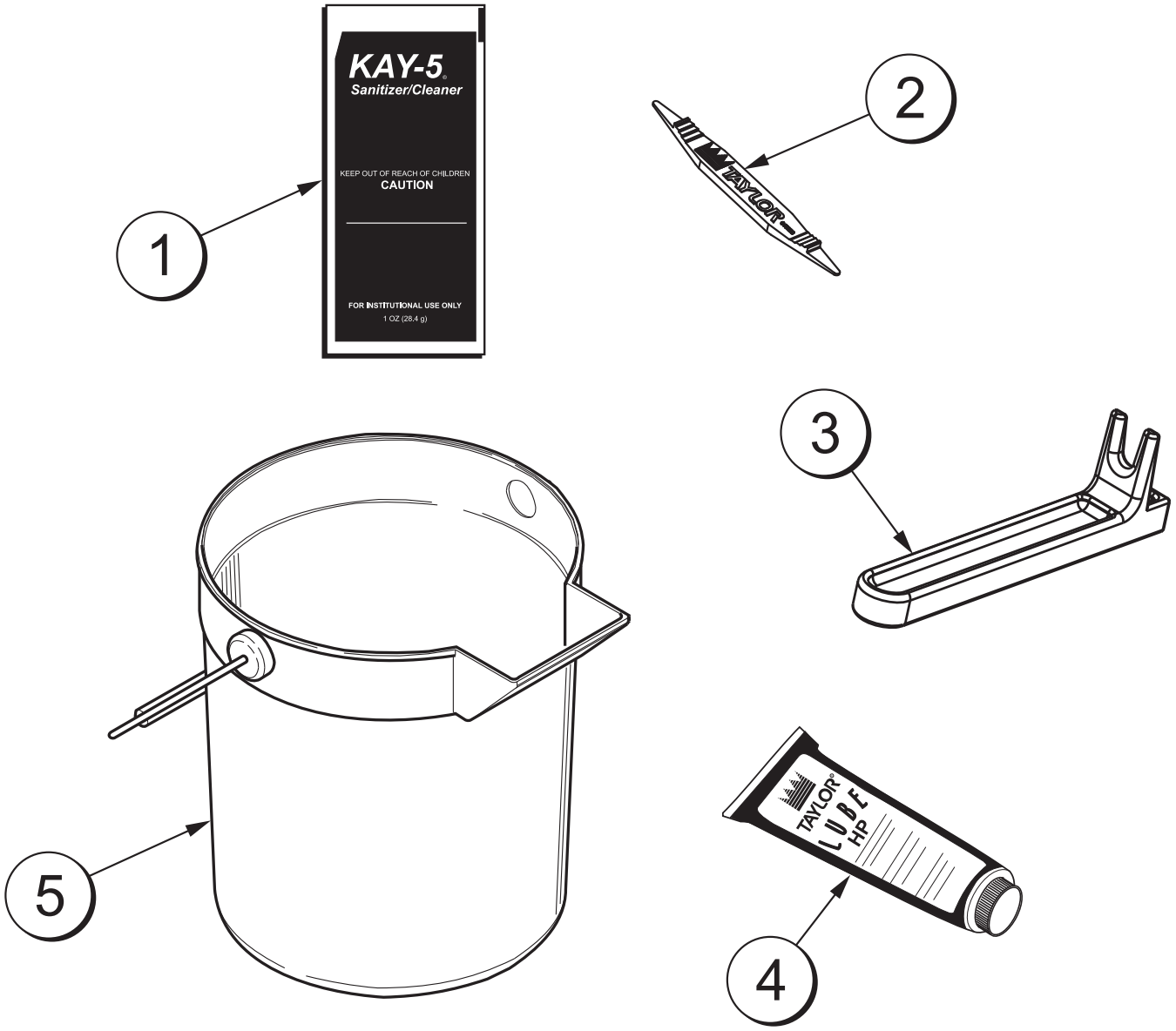


ITEM	DESCRIPTION	PART NO.
1	PLATE-DEC *SYRUP RAIL (C716)	062123
	PLATE-DEC *SYRUP RAIL (C717)	062124
2	PCB A.-INTERFACE	X59435-SER

ITEM	DESCRIPTION	PART NO.
3	INSULATOR-PCB-INTERFACE	057168
4	SCREW-6-32X3/8 BIN.HD SLOT	002201
5	CABLE-RIBBON-14C-3"L-SIL	056864

080805

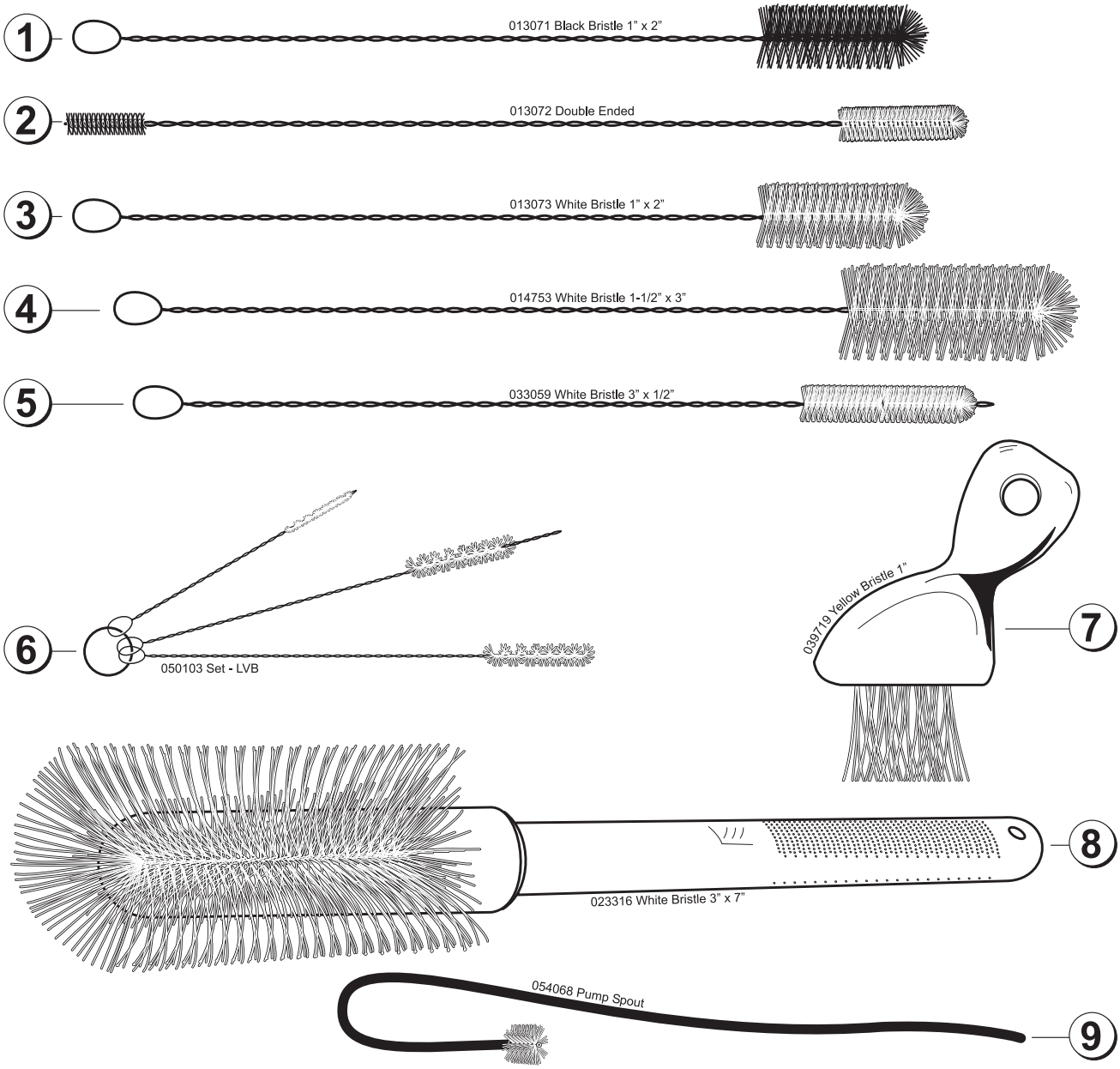
Accessories



ITEM	DESCRIPTION	PART NO.
1	SANITIZER KAY-5 CASE 125	041082
2	TOOL-O-RING REMOVAL	048260-WHT
3	TOOL-SHAFT-DRIVE PUMP (C708/C716)	057167
4	LUBRICANT-TAYLOR HI-PERF	048232
5	PAIL-MIX 10 QT.	013163

ITEM	DESCRIPTION	PART NO.
*	KIT A.-TUNE-UP (C708)	X56085
*	KIT A.-TUNE-UP (C709)	X49463-92
*	KIT A.-TUNE-UP (C716)	X49463-82
*	KIT A.-TUNE-UP (C717)	X49463-79
*	KIT A.-PARTS TRAY (C708)	X57797
*	KIT A.-PARTS TRAY (C716)	X58449

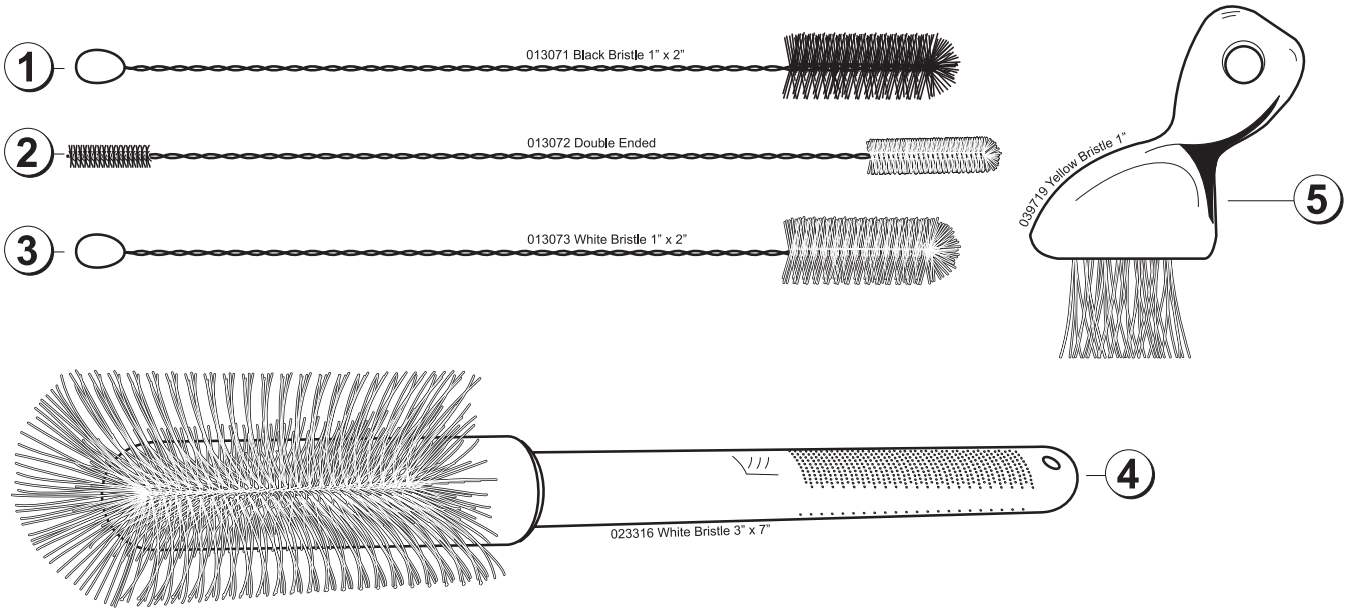
Brush Kit Assembly X44127 (C708/C716)



ITEM	DESCRIPTION	PART NO.
1	BLACK BRISTLE BRUSH	013071
2	DOUBLE END BRUSH	013072
3	WHITE BRISTLE BRUSH (1" x 2")	013073
4	WHITE BRISTLE BRUSH (1-1/2" x 3")	014753
5	WHITE BRISTLE BRUSH (1/2" x 3")	033059

ITEM	DESCRIPTION	PART NO.
6	BRUSH SET (3)	050103
7	YELLOW BRISTLE BRUSH	039719
8	WHITE BRISTLE BRUSH (3" x 7")	023316
9	PUMP SPOUT BRUSH	054068

Brushes - C709/C717



ITEM	DESCRIPTION	PART NO.
1	BRUSH-REAR BEARING	013071
2	BRUSH-DOUBLE-ENDED	013072
3	BRUSH-WHITE BRISTLE 1" X 2"	013073

ITEM	DESCRIPTION	PART NO.
4	BRUSH-WHITE BRISTLE 3" X 7"	023316
5	BRUSH-END-DOOR SPOUT	039719

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
ACCUMULATOR-COPPER 2"DIA 10"	047062	1	2	103	
ACTUATOR A.-DRAW SWITCH	X62401		1	103	
ADATOR-MIX INLET-SS-RED	54825	1	2	103	
BEARING-FRONT-SHOE	050348	1	2	000	KIT X50350
+SHOE-FRONT HELIX *FRONT*	050347	1	2	000	
+SHOE-FRONT HELIX *REAR*	050346	1	2	000	
BEARING-REAR SHELL-NICKEL	031324	1	2	000	
+GUIDE-DRIP SEAL	028992	1	2	000	
+NUT-BRASS BEARING	028991	1	2	000	
+WASHER-BEARING LOCK	012864	1	2	000	
BEATER A.-3.4QT-1 PIN-SUPPORT	X46231	1	2	103	
+BLADE-SCRAPER-PLASTIC 8-1/8L	046235	2	4	000	
+CLIP-SCRAPER BLADE 7.00 INCH	046236	2	4	103	
BELT-AX39	023874	2		000	208-230V 60HZ 1PH
BELT-AX32	032769		4	000	
BLADE A.-AGITATOR *C708*	X56591	1	2	103	
BLOCK-TERMINAL 2P .25 SPADE	051644	1		103	
BLOCK-TERMINAL 2P .2 SCREWTYPE	040321-002	1	2	103	
BLOCK-TERMINAL 2P-L1,L2	039422	1	2	103	208-230V 60HZ 1PH
BLOCK-TERMINAL 3P-L1,L2,L3	039423	1	2	103	208-230V 60HZ 3PH
BLOCK-TERMINAL 3P 20A, 300V	051331	1		103	208-230V 60HZ 1PH
BLOWER-HIGH OUTPUT-HTGS	059750-27		1	103	
BOOT-VALVE-EXPANSION	050900	1	2	000	BARREL
BOOT-VALVE-EXPANSION	027137	1		000	HOPPER TXV
BOTTLE-WASH-PLASTIC	044818	1		000	
BRUSH A.-PACKAGE-HT	X44127	1	1	000	
BRUSH-REAR BRG 1"D X 2"LG X	013071	1	1	000	
BRUSH-DBL END-PUMP & FEED TUBE	013072	1	1	000	
BRUSH-DRAW VALVE 1"OD X 2"X17"	013073	1	1	000	
BRUSH-DRAW VALVE 1-1/2"OD X 14"	014753	1	1	000	
BRUSH-MIX PUMP BODY-3" X 7" WH	023316	1	1	000	
BRUSH-1/2" DIA	033059	1	1	000	
BRUSH-END-DOOR-SPOUT-SS-HT	039719	1	1	000	
BRUSH-SET LVB	050103	1	1	000	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
BRUSH-PUMP SPOUT *MC13*	054068	1	1	000	
BRUSH-SET LVB	050103	1	1	000	
CABLE-RIBBON-14C-14"L SIP/SIP	040040-015	1		103	PCB TOUCH PAD DISPLAY
CABLE-RIBBON-20C-14"L-DIL/DIL	040040-040	1	2	103	J2C TO J12IF
CABLE-RIBBON-20C-17"L-DIL/DILR	040040-013		1	103	
CABLE-RIBBON-20C-18"L-DIL/DILR	040040-042	1		103	J7C TO J9IF
CABLE-RIBBON-50C-10"L-DIL/DIL	040040-058		1	103	
CABLE-RIBBON-50C-20"L-DIL/DIL	040040-011	1		103	J10C TO J2IF
CABLE-RIBBON-50C-25"L.DIL/DIL	040040-025		1	103	
CABLE-USB	056785	1	1	103	PCB TOUCH PAD DISPLAY
CAP-DESIGN 1.010"ID-6 POINT	014218		3	000	
CAP-VALVE BODY SS	056874-12	1		103	
CAP-VALVE BODY SS	056874-16	1		103	
CAPACITOR-MOTOR-AGITATOR	057525	1	2	103	
CAPACITOR-RUN 440VAC 50/60HZ	059789	1	1	103	
CAPACITOR-START 47-56UF/220TO	037251-34	1	2	103	
CASTER-4" SWV 3/4-10 STM	044106		4	103	
CD-OPS TRAINING VIDEO *C708*	062069-CD	1	1	000	
COMPRESSOR L64A113BBCA	048259-27E	1	2	512	S/N K7112082 & UP - 208-230V 60HZ 1PH - BRISTOL
+CAPACITOR-RUN 25UF/440V	037431	1	2	103	
+CAPACITOR-START 189-227UF/33	033044-1	1	2	103	
+RELAY-START-COMPRESSOR	062363	1	2	103	
+GROMMET-COMPRESSOR MOUNTING	037428	4	8	000	
+SLEEVE-MOUNTING-COMP.	039924	4	8	000	
COMPRESSOR L63A113DBLA	048259-33	1	2	512	208-230V 60HZ 3PH - BRISTOL S/N K7112086 & UP
COMPRESSOR CS20K6E-PFV-238	057011-27	1	2	512	S/N K7109124 & PRIOR - 208-230V 60HZ 1PH - COPELAWELD
+CAPACITOR-RUN 40MF/440V	036049	1	2	103	"
+CAPACITOR-START 189-227UF/330V	033044-1	1	2	103	"
+RELAY-START-COMPRESSOR	052401-27	1	2	103	
COMPRESSOR L63A113DBLA	048259-33	1	2	512	K7112084 & UP
COMPRESSOR CS20K6E-TF5-238	057011-33	1	2	512	S/N K7109134 & PRIOR - 208-230V 60HZ 3PH COPELAWELD
CONDENSER-AC 12LX18HX3.12T-5RW	055813-1		1	103	LEFT
CONDENSER-AC 12LX18HX3.12T-5RW	055813-2		1	103	RIGHT
CONDENSER-AC 16X16 3ROW 14FPI	056944	1		103	
COUPLING-DRIVE 3/4 HEX X 1-7/8	012721	1	2	103	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
COUPLING-3/8FS X 1/4FS	031791	2	2	103	
COUPLING-3/8FS X 5/16FS	054654	1	2	103	LINE A. DISCHARGE
COVER-HOPPER *BLACK*					SEE KIT A.COVER-HOPPER
DECAL-INST-CLN-DAY-HT-SS	045273	1	1	000	
DECAL-INST-CLN-HT-SS	045276	1	1	000	
DECAL-TROUBLESHOOT	038374	1	1	000	
DEFLECTOR-BLOWER-EXHAUST	059929		1	103	
DIAGRAM-WIRING *C708/C709*	057010-27	1		000	208-230V 60HZ 1PH
DIAGRAM-WIRING *C708/C709*	057010-33	1		000	208-230V 60HZ 3PH
DIAGRAM-WIRING *C716*	059900-27		1	000	208-230V 60HZ 1PH
DIAGRAM-WIRING *C716*	059900-33		1	000	208-230V 60HZ 3PH - 3 WIRE
DOOR A.-W/BAFFLE	X57332-SER	1		103	
+GASKET-DOOR HT 4"-DOUBLE	048926	1		000	
+HANDLE A.-DRAW-WELDED *C708*	X56742	1		103	
+O-RING-1/4 OD X .070W 50 DURO	015872	1		103	
+O-RING-7/8 OD X .103W	014402	3		000	
+PIN-HANDLE-SS *C602*	055819	1		103	
+SCREW-ADJUSTMENT-5/16-24 *602*	056332	1		103	
+VALVE A.-DRAW *C602*	X55820	1		000	
DOOR A.-3SPT*HT*LG BAF*W/O PRG	X59923-SER		1	103	
+BEARING-FRONT-SHOE	050348		2	000	
+DECAL-DOOR-3 SPOUT-TWIN TWIST	062239		1	000	
+GASKET-DOOR-4"-DART	048926-1		2	000	
+HANDLE A.-DRAW-WELDED *C602*	X56421-1		3	103	
+O-RING-1/4 OD X .070W 50 DURO	015872		3	000	
+O-RING-7/8 OD X .103W	014402		8	000	
+PIN-HANDLE-TWIN *C712/C717*	059894		1	103	
+SCREW-ADJUSTMENT-5/16-24 *602*	056332		3	103	
+SEAL-DRAW VALVE	034698		1	000	
+VALVE A.-DRAW-CENTER *C716/717	X59890		1	103	
+VALVE A.-DRAW-L & R *C716/717	X59888		2	103	
DRYER-FILTER-HP62-3/8 X 1/4S	048901	1		000	
DRYER-FILTER 3/8 X 3/8SOL HP	049154		2	000	
DVD-OPS TRAIN VID *C708/C716	062069-DVD	1	1	000	
EYELET-RESET BUTTON	013739	2	6	103	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
FASTENER-DOOR LATCH	030787	2	2	000	
FASTENER-DOOR STRIKE	030788	2	2	000	
FILTER-AIR-21.688X15.813HX.70W	052779-9	1	2	000	
FILTER-AIR-POLY-FLO	052779-11		2	000	
FILTER-CORCOM 6EH1	040140-001	1	1	103	
GASKET-BASE PAN *C708*	056364	1		000	
GEAR A.*REDUCER 4.21:1	021286-SER	1	2	212	
GUARD-POWER SWITCH	034830	1	1	103	
GUIDE A.-DRIP PAN	X28863	1		103	
GUIDE A.-DRIP PAN-PUMP *C706*	X56326	1		103	MIX PUMP BOX ASSY
GUIDE A.-DRIP PAN-MIX PUMP	X48228		2	103	
GUIDE A.-DRIP PAN-LEFT	X59910		1	103	
GUIDE A.-DRIP PAN-RIGHT	X59911		1	103	
GUIDE A.-DRIP PAN-CENTER	X59913		1	103	
HARNESS-WIRE-BEATER MOTOR	057725-27G	1		103	208-230V 60HZ 1
HARNESS-WIRE-BEATER MOTOR	057725-33G	1		103	208-230V 60HZ 3
HARNESS-WIRE-BEATER MOTOR-1PH	062053-27G		2	103	S/N K7112082 & UP - 208-230V 60HZ 1PH - BRISTOL
HARNESS-WIRE-CAP/RELAY BOX	057727-33	1		103	208-230V 60HZ 3
HARNESS-WIRE-COMPRESSOR	062056-33G		2	103	208-230V 60HZ 3 - S/N K7112086 & UP
HARNESS-WIRE-COMP. RIGHT*863	056103	1		103	208-230V 60HZ 3
HARNESS-WIRE-COMP. H60-H63	059245	1		103	208-230V 60HZ 3PH
HARNESS-WIRE-MAIN POWER *C708*	058285-27G	1		103	208-230V 60HZ 1
HARNESS-WIRE-MAIN POWER *C708*	058285-33G	1		103	208-230V 60HZ 3
HARNESS-WIRE-SOL VLV/FAN MTR	057726	1		103	208-230V 60HZ 1PH / 208-230V 60HZ 3
HARNESS-WIRE-THERMISTOR-PROBE	057728	1		103	208-230V 60 1 & 3
HOUSING A.-AGITATOR *C708*	X56586-03	1	2	103	
BODY-AGITATOR HOUSING *C708*	056588	1	2	103	
CAP-AGITATOR HOUSING *C708*	056589	1	2	103	
NUT-AGITATOR BELT HOUSING *H	043574	1	2	103	
MAGNET A.-AGITATOR*C708*	X57341	1	2	103	
MAGNET A.-AGITATOR-INNER	X41733	1	2	103	
SCREW-8-32X3/16 ALLEN SET	006812	1	2	000	
BUSHING-AGITATOR MAGNET *C708*	057342	1	2	NNN	
MOTOR-AGITATOR-24VAC 50/60 HZ	050535-03	1	2	103	
O-RING-1-3/8 OD X .070W	017395	1	2	000	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
PLATE-HOLDING-AGITATOR *C708*	056587	1	2	103	
SCREW-8-32X3/16 ALLEN SET	006812	1	2	000	
SCREW-4-40X1/4 SOC SS	600165	2	4	000	
INTERLOCK A.-DOOR	X65658	1	1	103	S/N K7085360 & UP - REPLACES 056249
FITTING DOOR INTERLOCK	065471	1	1	103	
SPRING-INTERLOCK DOOR	065409	1	1	000	
SWITCH-REED*DOOR INTERLOCK*6	056771	1	1	103	
JACK A.-FLAVORBURST *C706*	X56353	1	2	103	
KIT A.-COVER-HOPPER*SINGLE*BLK	X65368	1		000	
COVER-HOPPER *BLACK*	053809-1	1		103	
LABEL-CAUTION-AGITATOR	045191	1		000	
+PIN-RETAINING-HOPPER COVER	043934	4		103	
KIT A.-COVER-HOPPER*DUAL*BLK	X65178		1	000	
COVER-HOPPER *BLACK*	053809-1		2	103	
LABEL-CAUTION-AGITATOR	045191		2	000	
+PIN-RETAINING-HOPPER COVER	043934		2	103	
KIT A.-TUNE UP *C708*	X63146	1		000	
KIT A.-PUMP-SIMPLIFIED SS/SH	X56200-10	1		000	
O-RING-1-3/4 OD X .139W	008904	1		000	DRIVE CRANK
O-RING-11/16ODX.103W-RED	016132	2		000	PUMP FEED TUBE
O-RING-2-1/8 OD X .139W-#225	020051	2		000	VALVE CAP
O-RING 1/2 ID X .139W	048632	2		000	PUMP DRIVE SHAFT
GASKET-SIMPLIFIED PUMP VALVE	053527	1		000	
RING-CHECK-FEED-TUBE	056524	1		000	FEED TUBE
KIT A.-DOOR/BARREL SS C602	X56200-14	1		000	
O-RING-7/8 OD X .103W	014402	3		000	DRAW VALVE
SEAL-DRIVE SHAFT	032560	1		000	DRIVE SHAFT
GASKET-DOOR HT 4"-DOUBLE	048926	1		000	
SHOE-FRONT HELIX *REAR*	050346	1		000	BEATER
SHOE-FRONT HELIX *FRONT*	050347	1		000	BEATER
BEARING-FRONT-SHOE	050348	1		000	
TOOL-O-RING REMOVAL-FREEZER	048260-WHT	1		000	
KIT A.-TUNE C716 SIMPL PUMP	X49463-82		1	000	
KIT A.-PUMP-SIMPLIFIED SS/SHK	X56200-10		2	000	
O-RING-1-3/4 OD X .139W	008904		2	000	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
O-RING-11/16ODX.103W-RED	016132		4	000	
O-RING-2-1/8 OD X .139W-#225	020051		4	000	
O-RING 1/2 ID X .139W	048632		4	000	
GASKET-SIMPLIFIED PUMP VALVE	053527		2	000	
RING-CHECK-FEED-TUBE	056524		2	000	
KIT A.-DRAW VALVE C716	X56200-18		1	000	
CAP-DESIGN 1.010"ID-6 POINT	014218		3	000	
O-RING-7/8 OD X .103W	014402		8	000	
SEAL-DRAW VALVE	034698		1	000	
KIT A.-BARREL *TWIN SS*8784*	X56200-6		1	000	
SEAL-DRIVE SHAFT	032560		2	000	
GASKET-DOOR-4"-DART	048926-1		2	000	
SHOE-FRONT HELIX *REAR*	050346		2	000	
SHOE-FRONT HELIX *FRONT*	050347		2	000	
BEARING-FRONT-SHOE	050348		2	000	
TOOL-O-RING REMOVAL-FREEZER	048260-WHT		1	000	
LABEL-CAUTION-GRD-PERM-ENG/SP	032164	1	1	000	
LABEL-DOOR-MOVE PART	032749	1	1	000	
LABEL-RESET-MIX PMP	044452	1	1	000	
LABEL-SW-POWER-OFF/ON-SYMBOLS	052632	1	1	000	
LABEL-WARN-COVER	051433	4	7	000	
LABEL-3PH MTR PROT/1PH C-ENG/S	025949	1		000	208-230V 60HZ 3PH
LABEL-CK MTR ROTATE-CW-ENG/SPN	020090		1	000	208-230V 60HZ 3PH
LIP-DRIP-NOSE CONE	036435	1		000	
LIP-DRIP-NOSE CONE-TWIN	036434		1	000	
LUBRICANT-TAYLOR HI PERF-4 OZ	048232	1	1	000	
MAN-OPER C708/C716	059061-M	1	1	000	
MANIFOLD-1/2S THRU-1/4S OUT-	046688	1	2	103	LINE A.-DISCHARGE
MOTOR-1.5 HP CAPS@8&10 O'CLOCK	056865-27	1		212	208-230V 60HZ 1PH
MOTOR-1.5 HP	021522-27		1	212	208-230V 60HZ 1PH
MOTOR-1.5 HP	021522-33	1	2	212	208-230V 60HZ 3PH - 3 WIRE
MOTOR-2.0 HP	017650-33				
MOTOR A.-AGITATOR					SEE - HOUSING A.-AGITATOR
MOTOR-FAN W/4 BLADE 185W	500303-27	1		103	
+CAPACITOR-RUN 4.0UF/400V	500311	1		103	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
+GUARD-FAN	500304	1		103	
MOTOR-REDUCER 32 RPM-HPR PUMPM	036955-34	1	2	212	
+CAPACITOR-START 47-56UF/220TO	037251-34	1	2	103	
+RELAY-MTR START TI#4CR-1-625	039725-27	1	2	103	
+OVERLOAD-TI #2BM-20V9R-KK20-71	044464	1	2	103	
+NUT-OVERLOAD RESET	045026	1	2	000	
NUT-STUD-BLACK 2.563 LONG	058764	2	2	103	
NUT-STUD-BLACK 3.250 LONG	058765	2	2	103	
PAIL-MIX 10 QT.	013163	1	1	000	
PAN-DRIP 11-5/8 LONG	027503	1		103	
PAN A.-DRIP 5 1/2" LONG *C70	X56074	1		103	
PAN-DRIP 12.5	059736		2	NNN	
PAN-DRIP 19-1/2 LONG	035034		1	103	
PAN-DRIP 7.875	059737		2	103	
PANEL A.-FRONT-LOWER *C708*	X58955	1		103	S/N K4115494 AND UP
PANEL A.-FRONT-UPPER *C708*	X59423	1		103	S/N K4115494 AND UP
PANEL A.-FRONT-LOWER *C708*	X56954	1		103	S/N K4087456 & PRIOR
PANEL A.-FRONT-UPPER *C708*	X57017	1		103	S/N K4087456 & PRIOR
PANEL-SIDE-LEFT *C708*	056963	1		103	
PANEL A-SIDE-RIGHT *C707*	X57871	1		103	TOP AIR DISCHARGE USE X57869
PANEL-REAR *C706*	056077	1		103	5/24/2004 & UP
PANEL-REAR *C708*	056966	1		103	6/27/02 To 5/28/04
PANEL A.-FILTER-LOUVERED	X59928		2	103	
PANEL A.-FRONT *C712/C716*	X63879		1	103	TOP UPPER S/N K6024393 & UP
PANEL A.-FRONT *C712-C717*	X59836		1	103	TOP UPPER PRIOR TO S/N K5086297
PANEL A.-FRONT LOWER	X59854		1	103	
PANEL-CORNER-FRNT-R *C712/C716	063087		1	103	
PANEL-CORNER-FRNT-L*C712/C716	063088		1	103	
PANEL-REAR *C712/C716*	064258		1	103	
PANEL-SIDE-LEFT *C712/C717*	059906		1	103	
PANEL-SIDE-RIGHT *C712/C717*	059907		1	103	
PCB A.-INTERFACE *C708* ROHS	X63929-SER	1		212	DEC PLATE
CHIP-SOFTWARE *C602* FP	X40821-SER	1		103	
PCB A.-INTERFACE-HT-SS-C708	X58505-SER	1		212	
PCB A.-PERSONALITY-HT-SS	X46904-SER	1		212	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
PCB A.-HT INTERFACE BASE-C708	X58482-SER	1		212	
CHIP-SOFTWARE MIX LEVEL	X40799-SER	1		103	
PCB A.-CONTROL *C708* UVC3SM	X59209-SER	1		212	
CONTROL-UVC3 SURFACE MOUNT-PWM	062529-SER	1		212	
CHIP-SOFTWARE C708 UVC3SM	X40828-SER	1		103	
PCB A.-INTERFACE*C712-C717*ROH	X63925-SER		1	212	50 HZ UNITS - K6076635 & UP - PLATE A.-DEC
+CHIP-SOFTWARE *C602* FP	X40821-SER		1	103	
PCB A.-INTERFACE *C712-C717*	X62101-SER		*	212	50 HZ UNITS - K6053040 & PRIOR PLATE A.-DEC
+CHIP-SOFTWARE *C602* FP	X40821-SER		*	103	
PCB A.-CONTROL *C716* UVC3 SM	X62292-SER		1	212	
CONTROL-UVC3 SURFACE MOUNT-PWM	062529-SER		1	212	REPLACES 059189
CHIP-SOFTWARE UVC3 CS	X40820		1	103	
PCB A.-INTERFACE	X59435-SER		2	212	CONTROL
PCB A.-PERSONALITY-HT-SS	X46904-SER		2	212	
PCB A.-INTERFACE-HOT GAS-C602	X59485-SER		2	212	
CHIP-SOFTWARE MIX LEVEL	X40799-SER		2	103	
PCB A.-INTERFACE *C708* ROHS	X63929-SER	*	*	212	S/N K6076635 & UP - DEC PLATE
CHIP-SOFTWARE *C602* FP	X40821-SER	*	*	103	
PCB A.-INTERFACE *C708*	X57177-SER	*	*	212	S/N K6053040 & PRIOR - DEC PLATE
CHIP-SOFTWARE *C602* FP	X40821	*	*	103	
PIN-RETAINING-HOPPER COVER	043934	4	2	103	
PLATE-DEC *C708*	056958	1		103	
+GASKET-DEC PLATE *C708*	056991	1		000	
+INSULATOR-PCB-INTERFACE	057798	1		000	
PLATE-DEC *C716* SYRUP RAIL	062123		1	103	
+INSULATOR-PCB-INTERFACE *C60	057168		1	000	
PLUG-DRIP TRAY HOLE	029595	1		103	
PROBE A.-MIX	X56912	1		103	MIX LOW
PROBE-MIX OUT *C708*	056908	1		103	MIX OUT
+O-RING-1-3/8 OD X .070W	017395	3		000	
PROBE-THERMISTOR-BARREL-2% TOL	038061-BLK	1		103	HARNESS-WIRE-THERMISTOR PROBES
PROBE-THERMISTOR-HOPPER-2% TOL	039470-BLK	1		103	HARNESS-WIRE-THERMISTOR PROBES
PULLEY-2AK22 X .625-.6265	016403	1	2	103	208-230 60HZ 1PH & 3 PH
PULLEY-2AK74-5/8	027822	1	2	103	208-230V 60HZ 1 PH GEAR
PUMP A.-MIX SIMPLIFIED S.S.	X57029-14	1	2	103	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
ADAPTOR-MIX INLET*SOFT/SER*RED	054825	1	2	103	
CAP-VALVE BODY SS	056874-14	1	2	103	
+CLIP-RETAINER-MIX PUMP	044641	1	2	103	
CYLINDER A.-PUMP-HOPPER-S.S.	X57025	1		103	
GASKET-SIMPLIFIED PUMP VALVE	053527	1	2	000	
O-RING-2-1/8 OD X .139W-#225	020051	2	4	000	
PIN A.-RETAINING	X55450	1	2	103	
+PIN-COTTER-HAIRPIN-1/8DIA	044731	1	2	103	
PISTON	053526	1	2	103	
RECEIVER A.-REFRIG.AC*C708/709	X59351	1		103	
RELAY-3 POLE-20A-208/240 50/60	012725-33	1	2	103	
RELAY-DPDT 100UA TO 7A 1/8HP	052111-03	1	2	103	BEATER INTERLOCK
RELAY-DPDT-24VAC-30A@277V	054703-03	2		103	HOT GAS SOLENOIDS
RELAY-MTR START TI#4CR-1-625	039725-27	1	2	103	
SANITIZER KAY-5 125 PACKETS	041082	1	1	000	
SHAFT A.-DRIVE-MIX PUMP-HOPPER	X41947	1	2	103	
O-RING-1-3/4 OD X .139W	008904	1	2	000	
CRANK-DRIVE-HOPPER MIX PUMP	039235	1	2	103	
SHAFT-DRIVE-MIX PUMP-HOPPER	041948	1	2	103	
O-RING 1/2 ID X .139W	048632	2	4	000	
SHAFT-BEATER *C706/C707*	056078	1		103	
+SEAL-DRIVE SHAFT	032560	1		000	
SHAFT-BEATER	032564		2	103	
+SEAL-DRIVE SHAFT	032560		2	000	
SHELF-TRAY-DRIP *C706*	056076	1		103	
SHELL A.-INSULATED *C708/C709	X56969	1		512	
+STUD-NOSE CONE *C602*	055987	4		103	
SHELL A.-INSULATED *C716*	X63818		1	512	
+STUD-NOSE CONE *C602*	055987		4	103	
SHIELD-SPLASH *RD30*	049203	1		103	
SHIELD-SPLASH-WIRE-19-3/4 L	033813		1	103	
SHROUD A.-CONDENSER *C708/C709	X56922	1		103	
SLEEVE A.-MIX PUMP *HT*MCD	X44761	1	2	103	
+NUT-PUMP SLEEVE *8751*HT*	036933	1	2	000	
STARTER-1 PHASE-4.5 TO 7 A	041950-27K	1	2	103	208-230V 60HZ 1PH

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
STARTER-3 PHASE-3 TO 5 AMP	041950-33J	1	2	103	208-230V 60HZ 3PH
STRAINER-CONE MESH-1/4 ODF	062298	5	4	000	
STRAINER-CONE MESH 1/2 ODF	062299	2		000	
SWITCH A.-DRAW *C706*	X56147	1		103	
ARM A.-DRAW *C706*	X56253	1		103	
E-RING 3/16 .335 O.D.	049178	1		000	
INSULATOR-SWITCH 1/64 ARMITE	029099	2		000	
NUT-4-40 HEX -PLATED-	038623	2		000	
PIN-PIVOT	015478	1		103	
SCREW-4-40X1 RD HD STEEL-ZP	028890	2		000	
SPRING-RETURN-LEFT-SELF CLOSE	041660	1		103	
SPRING-RETURN-RIGHT-SELF CLOSE	041661	1		103	
SWITCH-LEVER-SPDT-10A-125-250V	028889	2		103	
SWITCH A.-DUAL LEVER	X62400		1	103	S/N K5027279 & UP - SEE SWITCH LEVER/ACTUATOR
SWITCH-LEVER-SPDT-10A-125-25	028889		4	103	
SCREW-4-40X1" TAPTITE PAN HD	045141		4	000	
BRACKET-SWITCH*C712*	062394		2	103	
ACTUATOR-TANDEM LEAF	062408		1	103	
SWITCH A.-DRAW *SELF CLOSING*	X59905		1	103	S/N K4115575 & PRIOR
ARM-SWITCH-DRAW-L	038649		1	103	
ARM-SWITCH-DRAW-R	038650		1	103	
E-RING 1/4	032190		4	000	
PIN-PIVOT-DRAW SWITCH	038484		1	103	
ROD-SPRING RETAINER	038254		1	103	
SCREW-4-40X1/2"TAPTITE PAN HD	042604		4	000	
SPRING-EXTENSION.375X.045X1.00	038922		2	103	
SPRING-RETURN-LEFT-TWIN TWIST	038923		1	103	
SPRING-RETURN-RIGHT-TWIN TWIST	038924		1	103	
SWITCH-LEVER-SPDT-11A-125-277V	039252		2	103	
SWITCH-PRESSURE 440 PSI-SOLDER	048230	1	2	103	LINE A.-DISCHARGE
SWITCH-PRESS 220 CO/270 CI	064282	1		103	
SWITCH-REED *DOOR INTERLOCK*	056249	1	1	103	S/N K7072606 & PRIOR - BEATER INTERLOCK
SWITCH-REED*DOOR INTERLOCK*6	056771	1		103	S/N K7085360 & UP - SEE INTERLOCK A.-DOOR
SWITCH-TOGGLE-DPDT*ON-NONE-ON	024295	1		103	
TOOL-O-RING REMOVAL-FREEZER	048260-WHT	1		000	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
TOOL-SHAFT-DRIVE-PUMP-HOPPER	057167	1	1	000	
TOOL-SHAFT-DRIVE-PUMP HOPR/LVB	047919	1		000	
TRANS.-120/208/240V PRI 24VSEC	051660	1		103	SOLENOIDS
TRANS.-CONT.-32VA 120/200/240V	054834	1		103	INTERFACE BOARD
TRAY-DRIP *C706/C707*BLACK	056858	1		103	
TRAY-DRIP-19-5/8 L X 4-7/8	033812		1	103	
TRAY-DRIP *C716*	063877		1	103	HOLDS 033812 TRAY S/N K6024393 & UP
TRAY-DRIP *C712/C717*	059892		1	103	USED PRIOR TO S/N k5086297
TRAY-PARTS-BARREL-3.4 QT-17"HT	045756	1		000	
TRAY-PARTS-PUMP-SIMPLIFIED SS	056525	1	2	000	
TRAY-PARTS-BARREL-3.4 QT*C716*	067431		1	000	S/N K9060000 & UP REPLALCES 045755
TRIM-CORNER-REAR-LEFT *C708*	056964	1		103	
TRIM-CORNER-REAR-RIGHT *C708*	056965	1		103	
TRIM-CORNER-REAR-L	059896		1	103	
TRIM-CORNER-REAR-R	059897		1	103	
TUBE A.-FEED-HOPPER S.S.	X56521	1		103	MIX PUMP
+RING-CHECK-FEED-TUBE	056524	1		000	
+O-RING-11/16ODX.103W-RED	016132	2		000	
TUBE A.-FEED-LEFT *C712/C717*	X59808		1	103	
+O-RING-11/16ODX.103W-RED	016132		2	000	
+RING-CHECK-FEED-TUBE	056524		1	000	
TUBE A.-FEED-RIGHT *C712/C717*	X59809		1	103	
+O-RING-11/16ODX.103W-RED 016132	016132		2	000	
+RING-CHECK-FEED-TUBE	056524		1	000	
VALVE-ACCESS-1/4MFL X 3/8ODSDR	053565	2	4	103	LINE A.-DISCHARGE
VALVE-CRANKCASE PRESS REG	064347	1		103	S/N K7085360 & UP REPLACES 057008
VALVE-EPR 5/8FS	065371	1		103	S/N K7085360 & UP REPLACES 057009
+BOOT-INSULATING-EPR	062048	2		000	
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	1	2	103	BARREL/HOT GAS BYPASS
+BOOT-VALVE-EXPANSION	050900	1	2	000	BARREL
VALVE-SOL 1/8ORF 1/4INX3/8OUT	053511-27	1	2	103	
VALVE-SOLENOID 7/16 ORF 5/8ODF	048626-27	1	2	103	
VALVE-SOLENOID 7/64ORF X 1/4S	043449-27	4	8	103	LINE A.-DRYER/VALVES
VALVE-THERMOSTATIC	057002	1	2	103	HOPPER
+BOOT-VALVE-EXPANSION	027137	1		000	HOPPER

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
VALVE-LIQUID INJ-HT GAS	057075-1	1	2	103	S/N K7012344 & UP - LINE A.-DRYER/VALVES
VALVE-TREV 3/8X3/8 220 *161*	055378	1	2	103	S/N K6112655 & PRIOR LINE A.-DRYER/VALVES
WATER COOLED					
BLOWER A. C712/C717	X62380-27G		1	103	
BRACKET A.-MOUNTING CONDENSER	X58931	1			
BRACKET-VALVE-W/C *C708* /	058440	1			
BRACKET-VALVE-W/C *C708*	058440	1		NNN	
CONDENSER-WC-COAX	047540-1	1		103	
CONDENSER-WC-COAX	047540		2	103	
GUARD-BLOWER	022505		1	103	
FAN-5 BLADE 7 " PUSH 30D	016289	1		103	
HOSE-RUBBER 1/2"ID X 7/8"/	R50200	5	12'	000	
MANIFOLD-1/2S THRU-1/4S OUT-	046688	1		103	
MOTOR A.-FAN *C708* WC	X59307-27	1		NNN	
MOTOR-FAN 9 WATT 1550RPM-CW	012768-27	1		103	
TERMINAL-MAL.SP.INS.18-22.25	026962	1		000	
BRACKET-FAN *453/750*	038641	1		103	
SCREW-8-36X3/8 SLOT HEX WASH	046137	5		000	
ADAPTOR-3/8MP X 1/2 BARB-	011021	2		103	
OUTLET A.-TEE	X25900		1	103	
PLATE-CONDENSER W/C	062043		1		
PLATE A.-MOUNTING-COUPLIN	X58935	1			
PLATE A.-MOUNTING-COUPLING	X58935	1		103	
PLATE-CONDENSER W/C	062043		1	103	
SWITCH-PRESSURE 350 PSI-SOLD	048231	1	2	103	
TEE-3/8" PIPE WATER VALVE	032953		1	103	
VALVE-WATER 3/8 REG/HEAD	046686	1	2	103	
TOP AIR DISCHARGE					
PANEL A.-SIDE-RIGHT *C708	X57869-SER	1		103	
50 HZ					
BELT-AX33	024396		4	000	200V 50HZ 3PH - 220/240V 50HZ 1PH - 380/415V 50HZ 3N~
BLOCK-TERMINAL 2P L1,N	039421	1		103	220-240V 50HZ 1PH
BLOCK-TERMINAL 3P L1,L2,L3	039423	1	2	103	200V 50HZ 3PH - 200V 50/60HZ 3PH
BLOCK-TERMINAL 4P L1,L2,L3,N	039424	1	1	103	380/415V 50HZ 3N~

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
BLOCK-TERMINAL 7P GREEN	024156	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH - 220/240 50HZ 1PH - 380/415V 50HZ 3N~
BLOCK-TERMINAL 2P L1,N	039421		2	103	220-240V 50HZ 1PH
CAPACITOR A.-RF	X58666	1		000	220-240V 50HZ 1PH
CAPACITOR A.-RF	X58666-1		2	000	220-240V 50HZ 1PH
CAPACITOR-RUN 25UF/370VAC	023739		2	103	220-240V 50HZ 1PH
CAPACITOR-RUN 25UF/370VAC	023739	1		103	220-240V 50HZ 1PH
CAPACITOR-START 161-193UF	031790		2	103	220-240V 50HZ 1PH
CAPACITOR-START 161-193UF	031790	1		103	220-240V 50HZ 1PH
CAP-VALVE BODY SS	056874-8	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH
CAP-VALVE BODY SS	056874-10	1		10	200V 50HZ 3PH - 200V 50/60HZ 3PH
CONTROL-INTERF-HT-SS-C712-ROHS	X63967-SER		2	212	220/240V 50HZ 1PH - 380/415V 50HZ 3N~
PCB A.-ROHS-PERSONALITY-HT-SS	X63922-SER		2	212	
CONTROL-ROHS-INTF-HOTGAS*C602*	063926		2	212	
CHIP-SOFTWARE MIX LEVEL	X40799		2	103	
COMPRESSOR L63A113DBLA	048259-33	1	2	512	200V 50HZ 3PH - 200V 50/60HZ 3PH
COMPRESSOR L63A113BBKA	048259-40	1	2	512	220/240V 50HZ 1PH
COMPRESSOR L63A113DBEA	048259-58	1	2	512	380/415V 50HZ 3N~
DIAGRAM-WIRING *C708/C709*	057010-39	1		000	200V 50HZ 3PH - 200V 50/60HZ 3PH
DIAGRAM-WIRING *C708/C709*	057010-40	1		000	220/240V 50HZ 1PH
DIAGRAM-WIRING *C708/C709*	057010-58	1		000	380/415V 50HZ 3N~
DIAGRAM-WIRING *C716*	059900-39		1	000	200V 50HZ 3PH
DIAGRAM-WIRING *C716*	059900-40		1	000	220-240V 50HZ 1PH
DIAGRAM-WIRING *C716*	059900-58		1	000	380-415V 50HZ 3N~
HARNESS-WIRE *C712-C717*C	065436-40		1	103	220-240V 50HZ 1PH
HARNESS-WIRE-BEATER MOTOR	057725-33G	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH
HARNESS-WIRE-CAP/RELAY BO	057727-G	1		103	220-240V 50HZ 1PH
HARNESS-WIRE-CAP/RELAY BOX	057727-33	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH - 380/415V 50HZ 3N~
HARNESS-WIRE-COMP. H60-H63	059245-G	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH - 380/415V 50HZ 3N~
HARNESS-WIRE-MAIN POWER *C708*	058285-33G	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH
HARNESS-WIRE-MAIN POWER *C70	058285-40	1		103	220/240V 50HZ 1PH
HARNESS-WIRE-MAIN POWER *C708*	058285-58	1		103	380/415V 50HZ 3N~
HARNESS-WIRE-SOL VLV/FAN MTR	057726-G	1		103	200V 50HZ 3PH - 200V 50/60HZ 3PH - 220/240V 50HZ 1PH - 380/415V 50HZ 3N~
HARNESS-WIRE-BEATER MTR-3 PH	062053-33G		2	103	200V 50HZ 3PH - 380/415V 50HZ 3N~
HARNESS-WIRE-COMPRESSOR	062056-33G		2	103	200V 50HZ 3PH - 380/415V 50HZ 3N~

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
HARNESS-WIRE-SOLEN.C716/C717	066107-G		2	103	200V 50HZ 3PH - 220/240V 50HZ 1PH - 380/415V 50HZ 3N~
LABEL-3PH MTR PROT/1PH C-ENG/S	025949	1	1	000	380/415V 50HZ 3N~
LABEL-CK MTR ROTATE-CW-ENG/SPN	020090	1	1	000	380/415V 50HZ 3N~
LABEL-EQUIPOTENTIAL CONNECTOR	076406		2	000	200V 50HZ 3PH - 220/240V 50HZ 1PH - 380/415V 50HZ 3N~
MOTOR-1.5 HP	021522-33	1	2	212	200V 50HZ 3PH - 200V 50/60HZ 3PH
MOTOR-1.5 HP CAPS@8&10 O'CLOCK	056865-34	1		212	220/240V 50HZ 1PH
MOTOR-1.5 HP CAPS@10&2 O'CLOCK	021522-34		2	212	220/240V 50HZ 1PH
MOTOR-1.5 HP	021522-35	1	2	212	380/415V 50HZ 3N~
PCB A.-INTERFACE-HT-SS-UK ROHS	X63966-SER	1		212	200V 50HZ 3PH - 200V 50/60HZ 3PH - 220/240 50HZ 1PH - 380/415V 50HZ 3N~
PCB A.-ROHS-PERSONALITY-HT-SS	X63922-SER	1		212	
PCB A.-ROHS-INTF BASE-C708	X63928-SER	1		212	
CHIP-SOFTWARE MIX LEVEL	X40799-SER	1		103	
PULLEY-2AK27 X .625-.6265	011545	1	2	103	200V 50HZ 3PH - 220/240V 50HZ 1PH - 380/415V 50HZ 3N~
RELAY-START-COMPRESSOR	038146	1	2	103	220-240V 50HZ 1PH
STARTER-1 PHASE-4.5 TO 7 A	041950-27K		1	103	220-240V 50HZ 1PH
STARTER-3 PHASE-3 TO 5 AM	041950-33J	1	2	103	200V 50HZ 3PH - 200V 50/60HZ 3PH
STARTER-3 PHASE-2.0 TO 3.	041950-33H	1	2	103	380-415V 50HZ 3N~
C71660FAHR					220/380V 60HZ 3PH-4 WIRE W- HOPPER LOCKS
BLOCK-TERMINAL 4P L1,L2,L3,N	039424		1	103	
BOX-TOOL 15 INCH PLASTIC	058669		1	000	
COMPRESSOR L63A113DBEA	048259-58		2	512	
COLLAR-HOLDING .730DX.109 SLOT	019481		2	103	
+SCREW	001086		2	000	
+WASHER	002681		2	000	
DISPENSER A.-CUP-3 CONE	X63388		1	103	
HOLDER A.-LID *5472*	X42811		1	103	
JAR-SYRUP*PLASTIC*SHALLOW	036573		2	103	
JAR-SYRUP*STAINLESS*SHALLOW	036574		2	103	
KIT A.-HOPPER LOCK-TWIN 053809	X59106		1	103	
KIT A.-POWER CORD HANGER	X56533		1	000	
KIT A.-TUNE C716 SIMPL PUMP	X49463-82		1	000	
KIT A.-TOPPING PUMP SPARES	X53795		1	000	
LID-SYRUP JAR	042706		2	103	
LADLE-1 OZ-120D BEND IN HANDLE	033637-1		2	103	
MOTOR-2.0 HP	017650-33		1	212	

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
PANEL A.-FRONT-SYR RAIL *C716*	X63884-27		1	103	
PULLEY-2AK22-7/8	019987		2	103	
PUMP A.-SYRUP-HEATED-BRN	X53800-BRN		1	103	
PUMP A.-SYRUP-HEATED-TAN	X53800-TAN		1	103	
PUMP A.-MIX SIMPLIFIED S.S.	X57029-16		2	103	
TOOL-SHAFT-DRIVE-PUMP-HOPPER	057167		1	000	
TRAY-PARTS-PUMP-SIMPLIFIED	056525		2	000	
TRAY-PARTS-BARREL-3.4 QT*C71	067431		1	000	
OPTIONS					
ADAPTOR-HOSE	058690	*			
ADAPTOR-SPOUT-HOSE-DRAIN	063018		*		
CART	C20100-000	*			FOR *C706/C707/C708/C709*
CART - REAR DOOR	C20100-AFA	*			FOR *C706/C707/C708/C709*
DISPENSER A.-3CUP/2CONE D	X59380	*			
DISPENSER A.-CUP-3 CONE	X63388		*		
KIT A.-ART.FAUCET-TWIN/PU	X29301-SER		*		
KIT A.-CONE DISPENSER-2/D	X48464	*			
KIT A.-CONE DISPENSER-4 T	X41141	*			
KIT A.-DECAL-FLVRBRST C70	X59229-1	*			
KIT A.-DECAL-FLVRBRST C71	X62375-1		*		
KIT A.-DECAL-TWIST C712-C	X62375-2		*		
KIT A.-DECAL-VANILLA C708	X59229-2	*			
KIT A.-HOPPER LOCK SGL 05	X57847	*			
KIT A.-HOPPER LOCK-TWIN 0	X59106		*		
KIT A.-LOCK-DRAW VALVE-TW	X62504-SER		*		
KIT A.-LOCK-DRAW VLV-SGL	X62568	*			
KIT A.-SYR RAIL-SD MT-DUA	X48014-12H	*			
KIT A.-SYR RAIL-SD MT-DUA	X48014-27H	*			
KIT A.-SYRUP RAIL *C708*F	X59454	*			
KIT A.-SYRUP RAIL*C708* S	X59455-12	*			
KIT A.-SYRUP RAIL*C708* S	X59455-27	*			
KIT A.-SYRUP RAIL-C700S	X58699-27	*			
KIT A.-SYRUP RAIL-SD DUAL	X59455-27H	*			
KIT A.-SYRUP RAIL-SD MT-D	X59455-12H	*			
KIT A.-SYRUP RAIL-SIDE MO	X48014-12	*			

+ Available Separately

DESCRIPTION	PART NUMBER	C708 QTY.	C716 QTY.	WARR. CLASS	REMARKS
KIT A.-SYRUP RAIL-SIDE MO	X48014-27	*			
KIT A.-WIDE AMB.OPR *C708	X64171-SER	*			WIDE AMB KIT
LEG A.-4" WITH RUBBER CAP	X43408	*			
LEG-4" 3/8-16 STUD	036397	*			
PANEL A.-SIDE-RIGHT *C708	X57869-SER	*			TAD PANEL
SPINNER A.-PANEL *C706*SI	X62383-27	*			
TOOL-APPLICATION-ROLLER-D	059234	*			
TRANS.-B&B-1/2 KVA	016780	*			CHANGE TO 240V
TRAY-PARTS-BARREL-3.4 QT*	067431		*		
TRAY-PARTS-PUMP-SIMPLIFIE	056525	*			

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
ACTUATOR A.-DRAW SWITCH	X62401		1	103	DRAW SWITCH LESS SWITCH-LEVER	
BRACKET A.-SPRING RETURN	X38257		1	103		
E-RING 1/4	032190		4	000		
BRACKET-SWITCH *338/339/754*	038253		1	NNN		
ROD-SPRING RETAINER	038254		1	103		
PIN-PIVOT-DRAW SWITCH	038484		1	103		
ARM-SWITCH-DRAW-L	038649		1	103		
ARM-SWITCH-DRAW-R	038650		1	103		
SPRING-EXTENSION.375X.045X1.	038922		2	103		
SPRING-RETURN-LEFT-TWIN TWIS	038923		1	103		
SPRING-RETURN-RIGHT-TWIN TWI	038924		1	103		
+SWITCH A.-DUAL LEVER	X62400		1	103	DRAW SWITCH LEVER	
SWITCH-LEVER -SPDT-10A-125-25	028889		4	103		
SCREW-4-40X1" TAPTITE PAN HD	045141		4	103		
BRACKET-SWITCH*C712*	062394		1	103		
ACTUATOR-TANDEM LEAF	062408		2	103		
BEARING-FRONT	050216	1	2	000		
BEARING-REAR SHELL-NICKEL	031324	1	2	000		
+GUIDE-DRIP SEAL	028992	1	2	000		
+NUT-BRASS BEARING	028991	1	2	000		
+WASHER-BEARING LOCK	012864	1	2	000		
BEATER A.-3.4QT-HELICORE	X31761	1	2	103		
+BLADE-SCRAPER-PLASTIC 17L	035174	6	8	000		
BELT-AX39	023874	2		000	208-230V 60HZ 1PH	
BELT-AX40	023875	2		000	220-240V 50HZ 1PH	
BELT-AX30	052191		4	000		
BLADE A.-AGITATOR *C708*	X56591	1	2	103		
BLOCK-TERMINAL 2P .25 SPADE	051644	1		103		
BLOCK-TERMINAL 2P-L1,L2	039422	1		103	208-230V 60HZ 1PH	
BLOCK-TERMINAL 3P-L1,L2,L3	039423	1		103	208-230V 60HZ 3PH	

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
BLOCK-TERMINAL 2P-L1,N	039421	1		103	220-240V 50HZ 1PH	
BLOCK-TERMINAL 3P 20A, 300V	051331	1		103	208-230V 60HZ 1PH	
BLOCK-TERMINAL 7P GREEN	024156	1		103	220-240V 50HZ 1PH	
BLOWER-HIGH OUTPUT-HTGS	059750-27		1	103	208-230V 60HZ 1PH	
BOTTLE-WASH-PLASTIC	044818	1		000		
BRUSH-REAR BRG 1"D X 2"LG X	013071	1	1	000		
BRUSH-DBL END-PUMP & FEED TU	013072	1	1	000		
BRUSH-DRAW VALVE 1"OD X 2"X1	013073	1	1	000		
BRUSH-MIX PUMP BODY-3" X 7"	023316	1	1	000		
BRUSH-END-DOOR-SPOUT-SS-HT	039719	1	1	000		
CABLE-RIBBON-50C-25"L.DIL/DIL	040040-025		1	103		
CABLE-2 COND-#22 UNSHIELDED	051696-18	1		103		
CABLE-RIBBON-14C-14"L SIP/SIP	040040-015	1		103	PCB TOUCH PAD DISPLAY-DEC PLATE	
CABLE-RIBBON-14C-3"L-SIL/SIL	056864		1	103	DEC PLATE C717	
CABLE-RIBBON-20C-14"L-DIL/DIL	040040-040	1	2	103	J2C TO J12IF	
CABLE-RIBBON-20C-17"L-DIL/DIL	040040-013		1	103		
CABLE-RIBBON-20C-18"L-DIL/DILR	040040-042	1		103	J7C TO J9IF	
CABLE-RIBBON-50C- 5"L-DIL/DI	040040-010	1		103		
CABLE-RIBBON-50C-10"L-DIL/DIL	040040-058		1	103		
CABLE-RIBBON-50C-20"L-DIL/DIL	040040-011	1		103	J10C TO J2IF DEC PLATE	
CABLE-USB	056785	1	1	103	PCB TOUCH PAD DISPLAY DEC PLATE	
COMPRESSOR CS17K6E-PFV-238	052397-27E	1	2	512	208-230V 60HZ 1PH	
+CAPACITOR-RUN 35UF/440V	048132	1	2	103	208-230V 60HZ 1PH	
+RELAY-START-COMPRESSOR	051957-27	1	2	103	208-230V 60HZ 1PH	
+CAPACITOR-START 189-227UF/25	053106	1	2	103	208-230V 60HZ 1PH	
COMPRESSOR CS18K6E-TF5-238	052397-33	1	2	512	208-230V 60HZ 3PH	
COMPRESSOR CS18K6E-PFJ-238	052397-40	1	2	512	220-240V 50HZ 1PH	
+CAPACITOR-START 145-175UF/25	052399	1	2	103	220-240V 50HZ 1PH	
+CAPACITOR-RUN 45UF/370V	052400	1	2	103	220-240V 50HZ 1PH	
+RELAY-START-COMPRESSOR	052401-27	1	2	103	220-240V 50HZ 1PH	
COMPRESSOR CS18K6E-TFD-238	052397-58	1	2	512	380-415 50HZ 3N~	

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
CONDENSER-AC 16X16 3ROW 14FPI	056944	1		103		
COUPLING-DRIVE 3/4 HEX X 1-7/8	012721	1	2	103		
COVER-HOPPER *BLACK*	053809-1	1	2	103		
+PIN-RETAINING-HOPPER COVER	043934	4	2	103		
DECAL-INST-CLN HPR	019029	1		000		
DECAL-TROUBLESHOOT	038374	1	1	000		
DIAGRAM-WIRING *C708/C709*	057010-27	1		000	208-230V 60HZ 1PH	
DIAGRAM-WIRING *C708/C709*	057010-33	1	1	000	208-230V 60HZ 3PH	
DIAGRAM-WIRING *C708/C709*	057010-40	1		000	220-240V 50HZ 1PH	
DIAGRAM-WIRING *C708/C709*	057010-58	1		000	380-415 50HZ 3N~	
DIAGRAM-WIRING *C717*	059901-27		1	000	208-230V 60HZ 1PH	
DIAGRAM-WIRING *C717*	059901-33		1	000	208-230V 60HZ 3PH	
DIAGRAM-WIRING *C717*	059901-40		1	000	220-240V 50HZ 1PH	
DIAGRAM-WIRING *C717*	059901-58		1	000	380-415 50HZ 3N~	
DOOR A.-W/BAFFLE *C708*	X56962-SER	1		103		
+HANDLE A.-DRAW *C706*	X56246	1		103		
+O-RING-1/4 OD X .070W 50 DUR	015872	1		000		
+SCREW-ADJUSTMENT-5/16-24 *60	056332	1		103		
+PIN-HANDLE-SS *C602*	055819	1		103		
+VALVE A.-DRAW *C602*	X55820	1		103		
+O-RING-7/8 OD X .103W	014402	3		000		
DOOR A.-3SPT*HT*LG BAF*W/O PRG	X59923-SER		1	103		
+BEARING-FRONT	050216		2	000		
+DECAL-DOOR-3 SPOUT-TWIN TWIS	062239		1	NNN		
+GASKET-DOOR-4"-DART	048926 -1		2	000		
+HANDLE A.-DRAW *C602*	X56421-1		3	103		
+O-RING-1/4 OD X .070W 50 DUR	015872		3	000		
+SCREW-ADJUSTMENT-5/16-24 *60	056332		3	103		
+PIN-HANDLE-TWIN *C712/C717*	059894		1	103		
+VALVE A.-DRAW-L & R *C716/71	X59888		2	103		
+O-RING-7/8 OD X .103W	014402		6	000		

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
+VALVE A.-DRAW-CENTER *C716/7	X59890		1	103		
+O-RING-7/8 OD X .103W	014402		6	000		
+SEAL-DRAW VALVE	034698		1	000		
DRYER-FILTER-HP62-3/8 X 1/4S	048901	1		000		
DRYER-FILTER 3/8 X 3/8SOL HP	049154		1	000		
EYELET-RESET BUTTON	013739	1	1	103		
FASTENER-DOOR LATCH	030787	2	4	000		
FASTENER-DOOR STRIKE	030788	2	4	000		
FILTER-AIR-21.688X15.813HX.70W	052779-9	1		000		
FILTER-AIR-POLY-FLO	052779-11		2	000		
FILTER-CORCOM 6EH1	040140-001	1	2	103		
GASKET-BASE PAN *C708*	056934	1		000		
GEAR A.*REDUCER 4.21:1	021286-SER	1	2	212		
GUARD-POWER SWITCH	034830	1	1	103		
GUIDE A.-DRIP PAN	X28863	1		103		
GUIDE A.-DRIP PAN-CENTER	X59913		1	103		
GUIDE A.-DRIP PAN-LEFT	X59910		1	103		
GUIDE A.-DRIP PAN-RIGHT	X59911		1	103		
HOUSING A.-AGITATOR *C708*	X56586-03	1	2	103	COMPLETE WITH HOUSING	
CAPACITOR-MOTOR-AGITATOR	056589	1	2	103		
MAGNET A.-AGITATOR*C708*	X57341	1	2	103		
MOTOR-AGITATOR-24VAC 50/60 H	050535-03	1	2	103		
+CAPACITOR-MOTOR-AGITATOR	057525	1	2	103		
SCREW-8-32X3/16 ALLEN SET	006812	1	2	000		
O-RING-1-3/8 OD X .070W	017395	1	2	000		
SCREW-4-40X1/4 SOC SS	600165	8	8	000		
JACK A.-FLAVORBURST *C706*	X56353	1	2	103		
KIT A.-TUNE UP *1SPOUT* *C709*	X49463-92	1			K7112096 & UP 11\13\07	
BEARING-FRONT	050216	1				
GASKET-DOOR HT 4"-DOUBLE	048926	1				
O-RING-7/8 OD X .103W	014402	3				

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
O-RING-1/4 OD X .070W 50 DUR	015872	1				
O-RING-3/8 OD X .070W	016137	1				
O-RING-.291 ID X .080W	018550	3				
O-RING-.643 OD X .077W	018572	2				
SEAL-DRIVE SHAFT	032560	1				
TOOL-O-RING REMOVAL-FREEZER	048260-WHT	1				
KIT A.-TUNE UP-3 SPT C717	X49463-79		1	000		
BEARING-FRONT	050216		2	000		
CAP-DESIGN 1.010"ID-6 POINT	014218		3	000		
GASKET-DOOR-4"-DART	048926-1		2	000		
O-RING-7/8 OD X .103W	014402		7	000		
O-RING-.291 ID X .080W	018550		6	000		
O-RING-.643 OD X .077W	018572		4	000		
SEAL-DRIVE SHAFT	032560		2	000		
SEAL-DRAW VALVE	034698		1	000		
TOOL-O-RING REMOVAL-FREEZER	048260-WHT		1	000		
LABEL-CAUTION-GRD-PERM-ENG/SP	032164	1	1	000		
LABEL-SW-POWER-OFF/ON-SYMBOLS	052632	1	1	000		
LIP-DRIP-NOSE CONE	036435	1	1	000		
LUBRICANT-TAYLOR HI PERF-4 OZ	048232	1	1	000		
MAN-OPER C709/C717	062080-M	1	1	000		
MANIFOLD-1/2S THRU-1/4S OUT-2	046687	1		103		
MANIFOLD-1/2S THRU-1/4S OUT-3	046688		2	103		
MOTOR-1.5 HP CAPS@8&10 O'CLOCK	056865-27	1		212	208-230V 60HZ 1PH	
MOTOR-1.5 HP CAPS@10&2 O'CLOCK	021522-27		2	212		
MOTOR-1.5 HP	021522-33	1	2	212	208-230V 60HZ 3PH	
MOTOR-1.5 HP CAPS@8&10 O'CLOCK	056865-34	1		212	220-240V 50HZ 1PH	
MOTOR-1.5 HP CAPS@10&2 O'CLO	021522-34		2	212	220-240V 50HZ 1PH	
MOTOR-1.5 HP	021522-35	1	2	212	380-415V 50HZ 3N~	
MOTOR-AGITATOR-24VAC 50/60 H	050535-03	1	2	103	SEE HOUSING ASSEMBLY	
MOTOR-AGITATOR	047987-27		1	103		

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
MOTOR-FAN W/4 BLADE 185W	500303-27	1		103		
+CAPACITOR-RUN 4.0UF/400V	500311	1		103		
+GUARD-FAN	500304	1		103		
NUT-STUD-BLACK 2.563 LONG	058764	2	2	103		
NUT-STUD-BLACK 3.250 LONG	058765	2	2	103		
ORIFICE	022465-100	1	1	103		
+O-RING-3/8 OD X .070W	016137	1	1	000		
PAIL-MIX 10 QT.	013163	1	1	000		
PAN-DRIP 11-5/8 LONG	027503	1		103		
PAN-DRIP 19-1/2 LONG	035034		1	103		
PAN-DRIP 12.5	059736		1	103		
PANEL A.-FRONT-LOWER	X56954	1		103		
PANEL A.-FRONT-UPPER	X57017	1		103		
PANEL A-SIDE-RIGHT	X57871	1		103		
PANEL-SIDE-LEFT *C708*	056963	1		103		
PANEL-SIDE-LEFT	056963-SP1	1		103		
PANEL-REAR C708	X57871	1		103		
PANEL-REAR C707 C709	056077-SP1	1		103		
PANEL A.-FRONT *C712-C717*	X59836		1	103		
PANEL A.-FRONT *C712/C717*	X59920		1	103		
PANEL-SIDE-LEFT *C712/C717*	059906		1	103		
PANEL-SIDE-RIGHT *C712/C717*	059907		1	103		
PANEL-REAR *C713/C717*	059917		1	103		
PANEL A.-FRONT LOWER	X59854		1	103		
PANEL A.-FILTER-LOUVERED	X59928		2	103		
PCB A.-CONTROL *C709* UVC3SM	X58891-SER	1		212		
CONTROL-UVC3 SURFACE MOUNT	059189-SER	1		212		
CHIP-SOFTWARE C709 UVC3SM	X40883	1		103		
PCB A.-CONTROL *C717* UVC3SM	X62293-SER		1	212		
CONTROL-UVC3 SURFACE MOUNT	059189-SER		1	212		
CHIP-SOFTWARE C717 UVC3SM	X40891		1	103		

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
PCB A.-INTERFACE-HT-SS	X58505-SER	1		212	CONTROL BOX	
PCB A.-PERSONALITY-HT-SS	X46904-SER	1		212		
PCB A.-HT INTERFACE BASE	X58482-SER	1		212		
CHIP-SOFTWARE MIX LEVEL	X40799	1		103		
PCB A.-INTERFACE	X57177-SER	1		212	DEC PLATE	
CHIP-SOFTWARE *C602* FP	X40821	1		103		
PCB A.-INTERFACE *C712-C717*	X62101-SER		1	212	DEC PLATE	
CHIP-SOFTWARE *C602* FP	X40821		1	103	DEC PLATE	
PCB A.-INTERFACE-HOT GAS-C60	X59485		2	212		
CHIP-SOFTWARE MIX LEVEL	X40799		1	103		
CABLE-RIBBON-26C-55"L-DIL/DI	040040-006		3	103		
PLATE-DEC *C709*	058859	1		103		
+GASKET-DEC PLATE	056991	1		000		
+SCREW-6-32X7/8 RHM	007017	4		000		
+ WASHER-#6 FLAT STNLS	023546	4		000		
PLATE-DEC *C717* SYRUP RAIL	062124		1	103		
PLUG-DRIP TRAY HOLE	029595	1		103		
PROBE A.-MIX	X56912	1	2	103	MIX LOW	
PROBE-MIX OUT *C708*	056908	1	2	103	MIX OUT	
+O-RING-1-3/8 OD X .070W	017395	3	6	000		
PROBE-THERMISTOR-HOPPER-2% TOL	039470-BLK	1	2	103	6"PROBE W/96"LEADS BLACK/YELLO	
PULLEY-2AK22 X .625-.6265	016403	1	2	103	BEATER MOTOR 208-230V 60HZ 1PH	
PULLEY-2AK27 X .625-.6265	011545	1	4	103	BEATER MOTOR 220-240V 50HZ 1PH	
PULLEY-2AK27 X .625-.6265	011545	1	2	103	BEATER MOTOR 380-415V 50HZ 3N~	
PULLEY-2AK74-5/8	027822	1		103	GEAR	
PULLEY-2AK64-5/8 BORE	039695		2	103		
PULLEY-AGT MTR-1.910PDX3/8BO	042063		1	103		
RELAY-3 POLE-20A-208/240 50/60	012725-33	1	2	103		
RELAY-DPDT 100UA TO 7A 1/8HP	052111-03	1	2	103	BEATER INTERLOCK	
RELAY-DPDT-24VAC-30A@277V	054703-03	2		103	HOT GAS SOLENOIDS	
SANITIZER KAY-5 125 PACKETS	041082	1	1	000		

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
SHAFT-BEATER *C706/C707*	056078	1		103		
+SEAL-DRIVE SHAFT	032560	1		000		
SHAFT-BEATER	032564		2	103		
+SEAL-DRIVE SHAFT	032560		2	000		
SHELF-TRAY-DRIP *C706*	056076	1		103		
SHELL A.-INSULATED *C709*	X58858	1		512		
+STUD-NOSE CONE *C602*	055987	4		103		
SHELL A.-INSULATED *C717*	X59866		1	512		
+STUD-NOSE CONE *C602*	055987		4	103		
SHIELD-SPLASH *RD30*	049203	1		103		
SHIELD-SPLASH-WIRE-19-3/4 L	033813		1	103		
SHROUD A.-CONDENSER *C708/C709	X56922	1		103		
STARTER-1 PHASE-4.5 TO 7 A	041950-27K	1	1	103	208-230V 60HZ 1PH	
STARTER-3 PHASE-3 TO 5 A	041950-33J	1	1	103	208-230V 60HZ 3PH	
STARTER-1 PHASE-4.5 TO 7 A	041950-27K	1	1	103	220-240V 50HZ 1 PH	
STARTER-3 PHASE-2.0 TO 3.3 AMP	041950-33H	1	1	103	380-415V 50HZ 3N~	
STRAINER-CONE MESH-1/4 ODF	062298	3	10	000		
STRAINER-CONE MESH 1/2 ODF	062299	2	4	000		
SWITCH A.-DRAW	X56147	1		103		
ARM A.-DRAW	X56253	1		103		
E-RING 3/16 .335 O.D.	049178	1		000		
INSULATOR-SWITCH 1/64 ARMITE	029099	2		000		
NUT-4-40 HEX -PLATED-	038623	2		000		
PIN-PIVOT	015478	1		103		
SCREW-4-40X1 RD HD STEEL-ZP	028890	2		000		
SPRING-RETURN-LEFT-SELF CLOSE	041660	1		103		
SPRING-RETURN-RIGHT-SELF CLOSE	041661	1		103		
SWITCH-LEVER-SPDT-10A-125-250V	028889	2		103		
SWITCH A.-DRAW C717			**		**See Actuator A.-Dr Sw & Sw A.-Dual Lever	
SWITCH A.-DUAL LEVER	X62400		1	103		

+ Available Separately

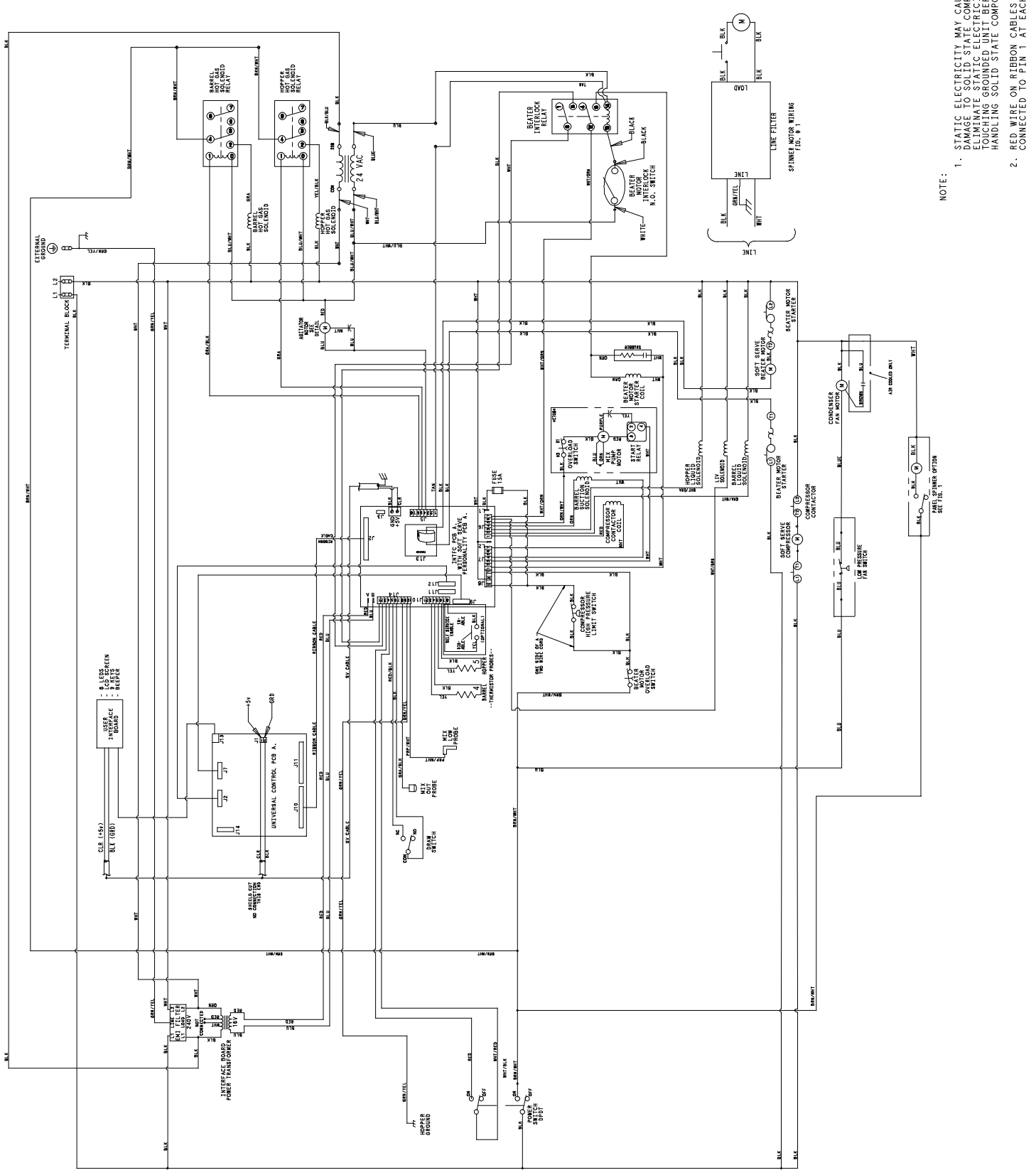
DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
SWITCH-LEVER-SPDT-10A-125-25	028889		4	103		
SCREW-4-40X1" TAPTITE PAN HD	045141		4	103		
BRACKET-SWITCH*C712*	062394		1	103		
ACTUATOR-TANDEM LEAF	062408		2	103		
SWITCH-PRESSURE 440 PSI-SOLDER	048230	1	2	103		
SWITCH-PRESS 220 CO/270 CI	064282	1		103		
SWITCH-REED *DOOR INTERLOCK*	056249	1	1	103	BEATER INTERLOCK	
SWITCH-TOGGLE-DPDT*ON-NONE-ON	024295	1		103		
TOOL-O-RING REMOVAL-FREEZER	048260-WHT	1	1	000		
TRANS.-120/208/240V PRI 24VSEC	051660	1	1	103	SOLENOIDS	
TRANS.-CONT.-32VA 120/200/240V	054834	1		103	INTERFACE BOARD	
PAN-DRIP 11-5/8 LONG	027503	1		103		
PAN-DRIP 19-1/2 LONG	035034		1	103		
PAN-DRIP 12.5	059736		2	103		
TRIM-CORNER-REAR-LEFT *C708*	056964	1		103		
TRIM-CORNER-REAR-RIGHT *C708*	056965	1		103		
TRIM-CORNER-REAR-L	059896		1	103		
TRIM-CORNER-REAR-R	059897		1	103		
TUBE A.-FEED-SC-INNER-5/3	X32824-2	1		103		
+O-RING-.291 ID X .080W	018550	3		000		
TUBE A.-FEED-OUTER-HT	X34641	1	2	103		
+O-RING-.643 OD X .077W	018572	2	4	000		
TUBE A.-FEED-SC-INNER-5/3	X32824-3		2	103		
+O-RING-.291 ID X .080W	018550		4	000		
VALVE-ACCESS-1/4MFL X 3/8ODSDR	053565	2	4	103		
VALVE-EPR	057009	1	2	103		
VALVE-EXP-AUTO-1/4S X1/4 FPT	046365	2	4	103		
+BOOT-VALVE-EXPANSION	027137	2	4	000		
VALVE-LIQUID INJ-HT GAS	057075-1	1				
VALVE-OPR	057008	1	2	103	CRANK CASE PRESSURE REGULATOR	
VALVE-SOL 1/8ORF 1/4INX3/8OUT	053511-27	1	2	103		

+ Available Separately

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
VALVE-SOLENOID 7/16 ORF 5/8ODF	048626-27	1	2	103		
VALVE-SOLENOID 7/64ORF X 1/4S	043449-27	4	8	103		
VALVE-THERMOSTATIC	057002	1	5	103	HOPPER	
VALVE-TREV 3/8X3/8 220 *161*	055378	1	2	103	HOPPER	
VIDEO-TRAIN C708/C709/C716/717	062069-V	1	1	000		
VIDEO-TRAIN C708/C709/C716/717	062069-PAL	1	1	000		
WATER COOLED					.	
BLOWER A. C712/C717	X62380-27G		1	103		
BRACKET A.-MOUNTING CONDENSE	X58931	1		000		
BRACKET-VALVE-W/C *C708*	058440	1		103		
CONDENSER-WC-COAX	047540-1	1		103		
CONDENSER-WC-COAX	047540		2	103		
DEFLECTOR-BLOWER-EXHAUST	059929		1	103		
FAN-5 BLADE 7 " PUSH 30DEG CW	016289	1		103		
GUARD-BLOWER	022505		1	103		
HOSE-RUBBER 1/2 ID X 7/8 OD	R50200	5	10	000		
MOTOR A.-FAN *C708* WC	X59307-27	1		000		
MOTOR-FAN 9 WATT 1550RPM-CW	012768-27	1		103		
BRACKET-FAN *453/750*	038641	1		103		
SCREW-8-36X3/8 SLOT HEX WASH	046137	5		000		
OUTLET A.-TEE	X25900		1	103		
PANEL-SIDE-RIGHT-WC *C708/709*	058932	1		000		
PANEL-SIDE-L. W/C *C712/C717	062160		1	103		
PANEL-SIDE-R. W/C *C712/C717	062161		1	103		
PLATE-CONDENSER W/C	062043		1	103		
PLATE A.-MOUNTING-COUPLING	X58935	1		103		
SWITCH-PRESSURE 350 PSI-SOLD	048231	1	1	103		
TEE-3/8" PIPE WATER VALVE	032953		1	103		
VALVE-WATER 3/8 REG/HEAD PRESS	046686	1	2	103		

DESCRIPTION	PART NUMBER	C709 QTY.	C717 QTY.	WARR. CLASS	REMARKS	PARTS UPDATE
TOP AIR DISCHARGE						
PANEL A.-SIDE-RIGHT *C708	X57869-SER	1		103		

+ Available Separately



Models C708/C709
057010-27
Rev. 5/09

Models C708/C709
057010-27
Inset
Rev. 5/09

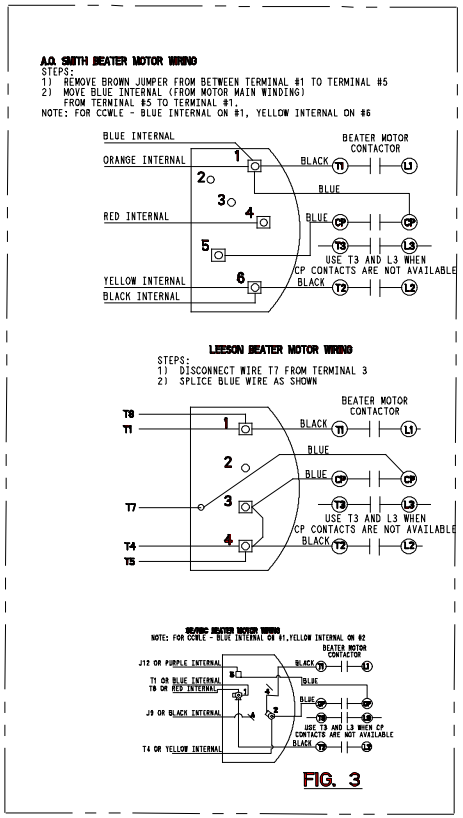
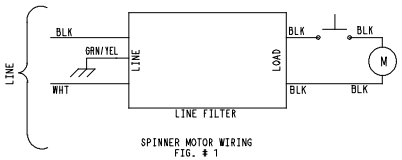


FIG. 3

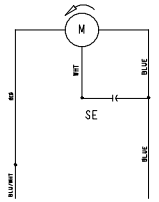
JUMPER SETTINGS

	UVC3 BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
JP1	PINS 1 AND 2	JUMPER INSTALLED- NORMAL APPLICATIONS USING REFRIGERATED MIX.	YES
	PINS 1 AND 2	NO JUMPER INSTALLED-GENERAL MARKET CONFIGURATION USING NON-REFRIGERATED MIX. IGNORES HOPPER TEMPERATURE LOCKOUT PARAMETERS TO ALLOW ADDING NON-REFRIGERATED MIX INTO THE HOPPER.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP2	PINS 1 AND 2	DOMESTIC CONFIGURATION-JUMPER INSTALLED. HOPPER TEMPERATURE NOT DISPLAYED ON SCREEN/HEAT SYMBOL KEYS ONLY ACTIVE WHEN A LOCKOUT CONDITION HAS OCCURRED/ STANDBY KEYS DISABLED.	YES
	PINS 1 AND 2	INTERNATIONAL CONFIGURATION-JUMPER NOT INSTALLED. HOPPER TEMPERATURES DISPLAYED ON SCREEN/MANUAL HEAT CYCLE START BY SELECTING HEAT SYMBOL/STANDBY KEYS FUNCTIONAL.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP3	PINS 1 AND 2	JUMPER INSTALLED ENABLES AUDIBLE DEVICE LOCATED ON UVC3 CONTROL. DISABLED IN MODELS THAT HAVE AN AUDIBLE DEVICE ON THE CONTROL PANEL BOARD.	NO
	PINS 3 AND 4	JUMPER STORAGE	NO

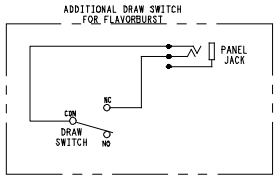
	INTERFACE BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
W2			NO
W3			NO
W4			NO
W5			NO
A	SOFT SERVE PERSONALITY BOARD	0-6 AMP BEATER MOTOR AMPERAGE RANGE	NO
B	SOFT SERVE PERSONALITY BOARD	0-12 AMP BEATER MOTOR AMPERAGE RANGE	YES
J10	PINS 1 & 2	JUMPER INSTALLED-ENABLES 59°F PRODUCT TEMPERATURE CHECK.	CUSTOMER SPECIFIC

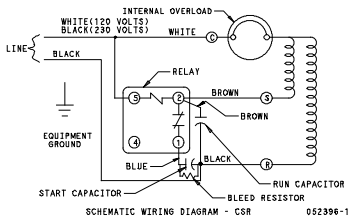


SPINNER MOTOR WIRING
FIG. # 1

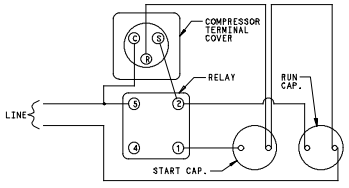


AGITATOR MOTOR
DETAIL





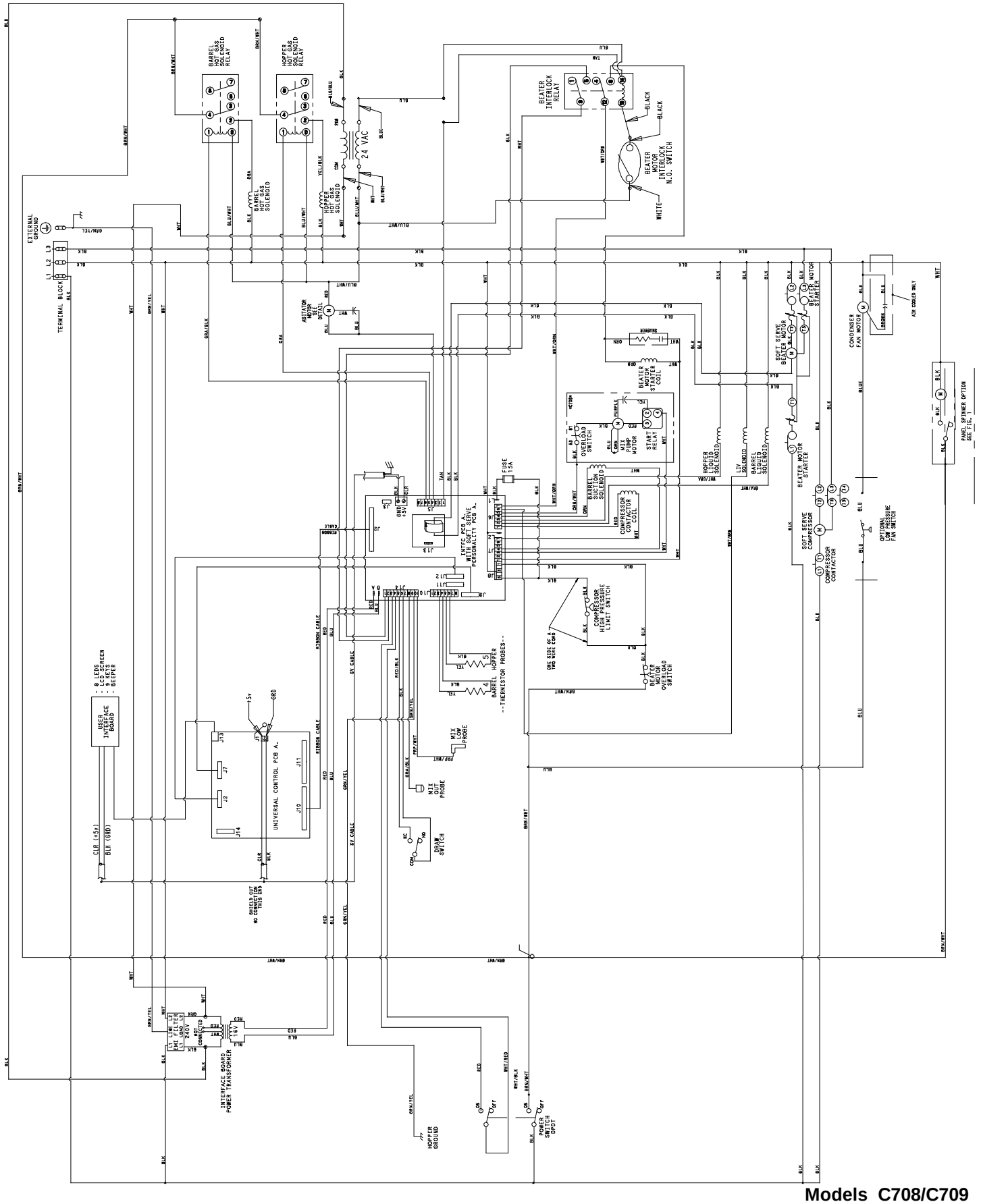
SCHEMATIC WIRING DIAGRAM - CSR 052396-1



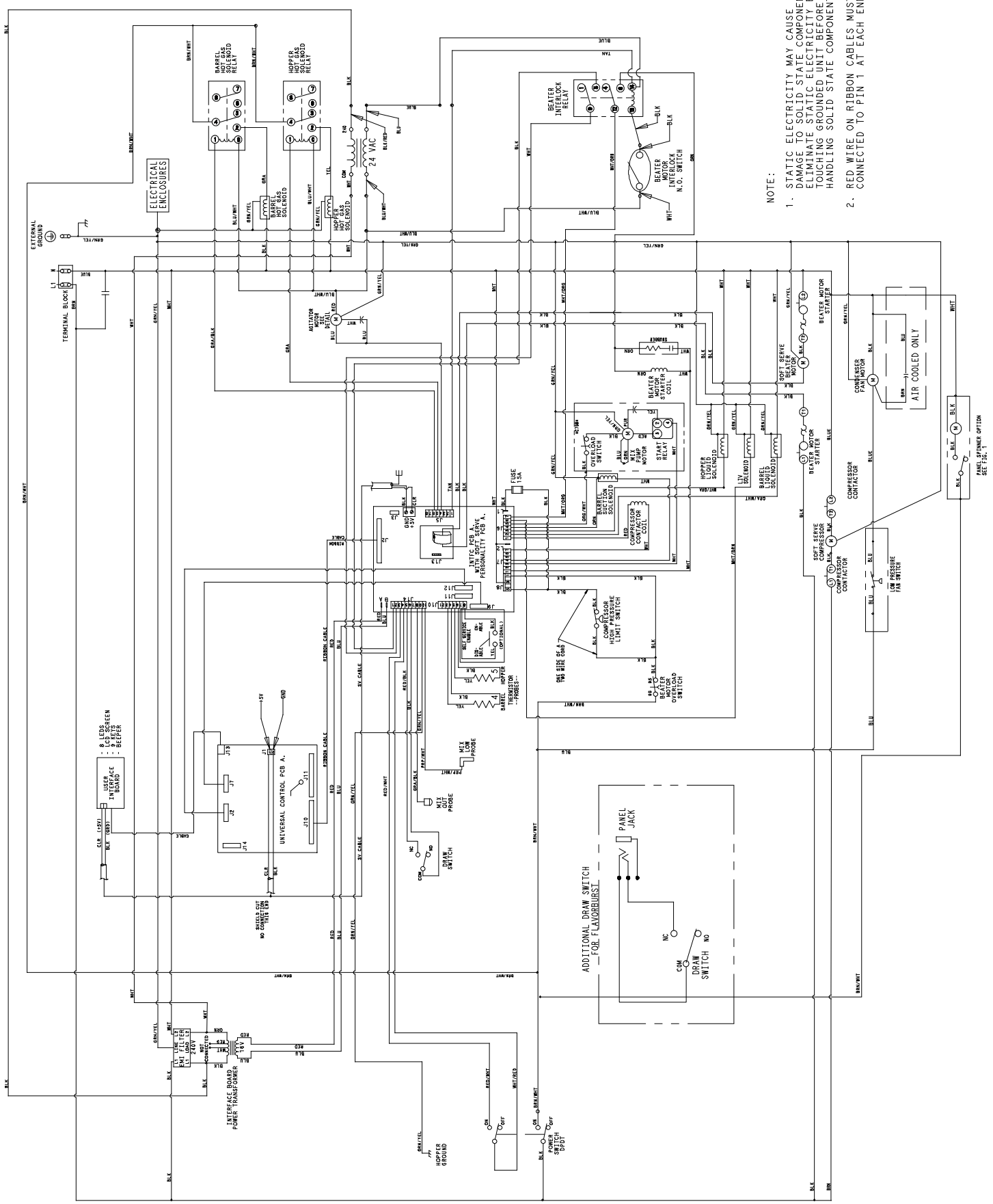
ABOVE ELECTRICAL DIAGRAM SHOWS WIRING NECESSARY TO HOOK UP A COMPRESSOR USING A START AND RUN CAPACITOR (CSR) WITH A RELAY.

NOTE:

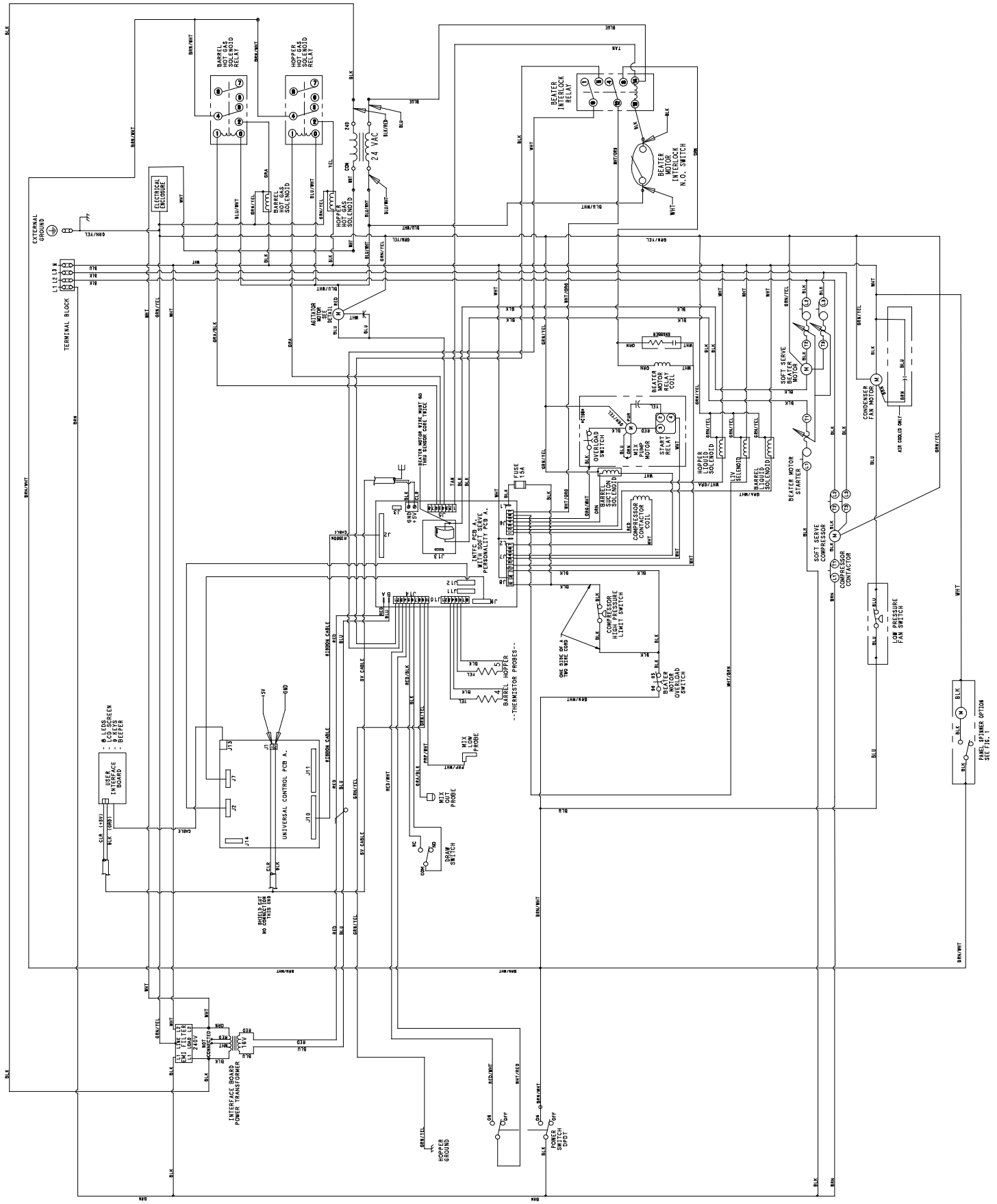
1. STATIC ELECTRICITY MAY CAUSE DAMAGE TO SOLID STATE COMPONENTS. ELIMINATE STATIC ELECTRICITY BY TOUCHING GROUNDED UNIT BEFORE HANDLING SOLID STATE COMPONENTS.
2. RED WIRE ON RIBBON CABLES MUST BE CONNECTED TO PIN 1 AT EACH END.



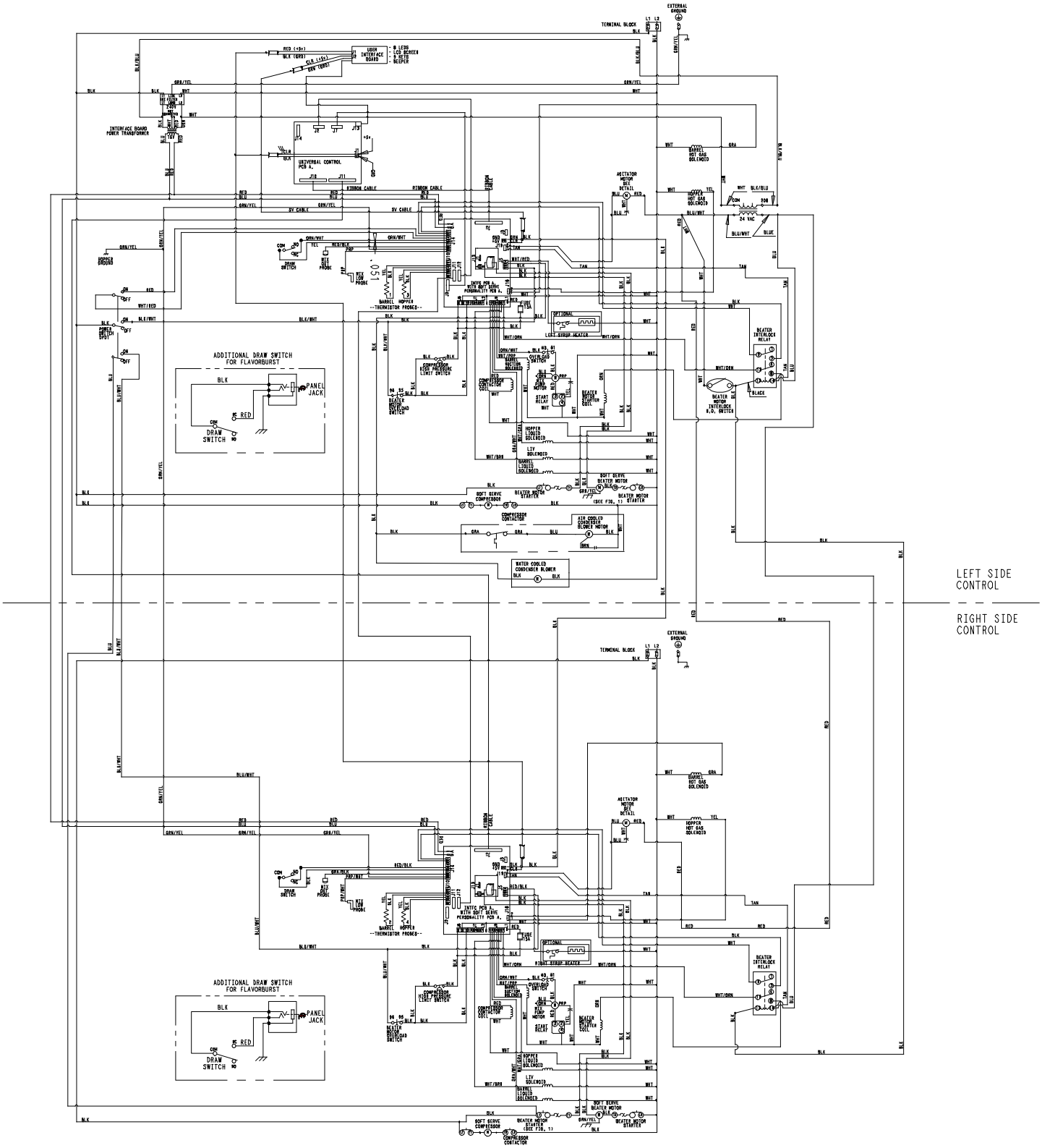
Models C708/C709
057010-33
Rev. 5/09



Models C708/C709
057010-40
Rev. 5/09



Models C708/C709
057010-58
Rev. 5/09



Model C716
059900-27
Rev. 2/08

	UVC3 BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
JP1	PINS 1 AND 2	JUMPER INSTALLED- NORMAL APPLICATIONS USING REFRIGERATED MIX.	YES
	PINS 1 AND 2	NO JUMPER INSTALLED-GENERAL MARKET CONFIGURATION USING NON-REFRIGERATED MIX. IGNORES HOPPER TEMPERATURE LOCKOUT PARAMETERS TO ALLOW ADDING NON-REFRIGERATED MIX INTO THE HOPPER.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP2	PINS 1 AND 2	DOMESTIC CONFIGURATION-JUMPER INSTALLED. HOPPER TEMPERATURE NOT DISPLAYED ON SCREEN/HEAT SYMBOL KEYS ONLY ACTIVE WHEN A LOCKOUT CONDITION HAS OCCURRED/ STANDBY KEYS DISABLED.	YES
	PINS 1 AND 2	INTERNATIONAL CONFIGURATION-JUMPER NOT INSTALLED. HOPPER TEMPERATURES DISPLAYED ON SCREEN/MANUAL HEAT CYCLE START BY SELECTING HEAT SYMBOL/STANDBY KEYS FUNCTIONAL.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP3	PINS 1 AND 2	JUMPER INSTALLED ENABLES AUDIBLE DEVICE LOCATED ON UVC3 CONTROL. DISABLED IN MODELS THAT HAVE AN AUDIBLE DEVICE ON THE CONTROL PANEL BOARD.	NO
	PINS 3 AND 4	JUMPER STORAGE	NO

	LEFT INTERFACE BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
W2			NO
W3		JUMPER INSTALLED-ACTIVATES SYRUP HEATERS	NO*
W4			NO
W5			NO
A	SOFT SERVE PERSONALITY BOARD	0-6 AMP BEATER MOTOR AMPERAGE RANGE	NO
B	SOFT SERVE PERSONALITY BOARD	0-12 AMP BEATER MOTOR AMPERAGE RANGE	YES

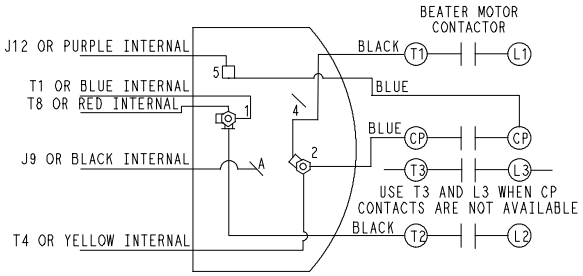
	RIGHT INTERFACE BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
W2		JUMPER INSTALLED-ENABLES 59°F PRODUCT TEMPERATURE CHECK.	YES
W3			NO
W4			NO
W5			NO
A	SOFT SERVE PERSONALITY BOARD	0-6 AMP BEATER MOTOR AMPERAGE RANGE	NO
B	SOFT SERVE PERSONALITY BOARD	0-12 AMP BEATER MOTOR AMPERAGE RANGE	YES

*IF THE UNIT HAS THE INTEGRAL SYRUP OPTION -405, THEN THIS JUMPER SHOULD BE INSTALLED.

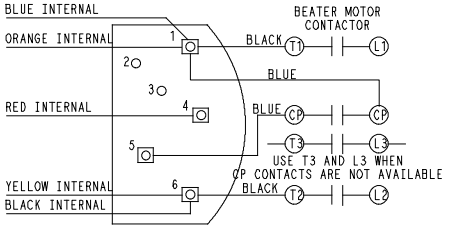
NOTE:

1. STATIC ELECTRICITY MAY CAUSE DAMAGE TO SOLID STATE COMPONENTS. ELIMINATE STATIC ELECTRICITY BY TOUCHING GROUNDED UNIT BEFORE HANDLING SOLID STATE COMPONENTS.
2. RED WIRE ON RIBBON CABLES MUST BE CONNECTED TO PIN 1 AT EACH END.

GE/RBC BEATER MOTOR WIRING
NOTE: FOR CCWLE - BLUE INTERNAL ON #1,YELLOW INTERNAL ON #2



A.O. SMITH BEATER MOTOR WIRING
STEPS:
1) REMOVE BROWN JUMPER FROM BETWEEN TERMINAL #1 TO TERMINAL #5
2) MOVE BLUE INTERNAL (FROM MOTOR MAIN WINDING) FROM TERMINAL #5 TO TERMINAL #1.
NOTE: FOR CCWLE - BLUE INTERNAL ON #1, YELLOW INTERNAL ON #6



LEESON BEATER MOTOR WIRING
STEPS:
1) DISCONNECT WIRE T7 FROM TERMINAL 3
2) SPLICE BLUE WIRE AS SHOWN

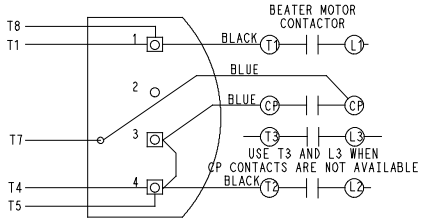
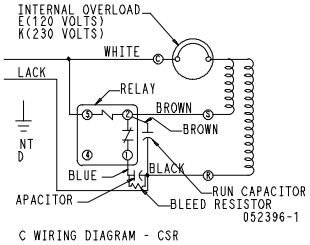
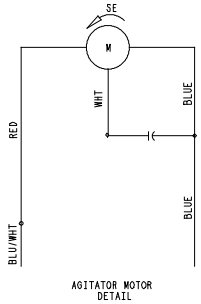


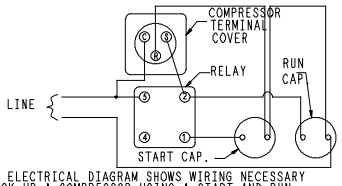
FIG. 1



C WIRING DIAGRAM - CSR



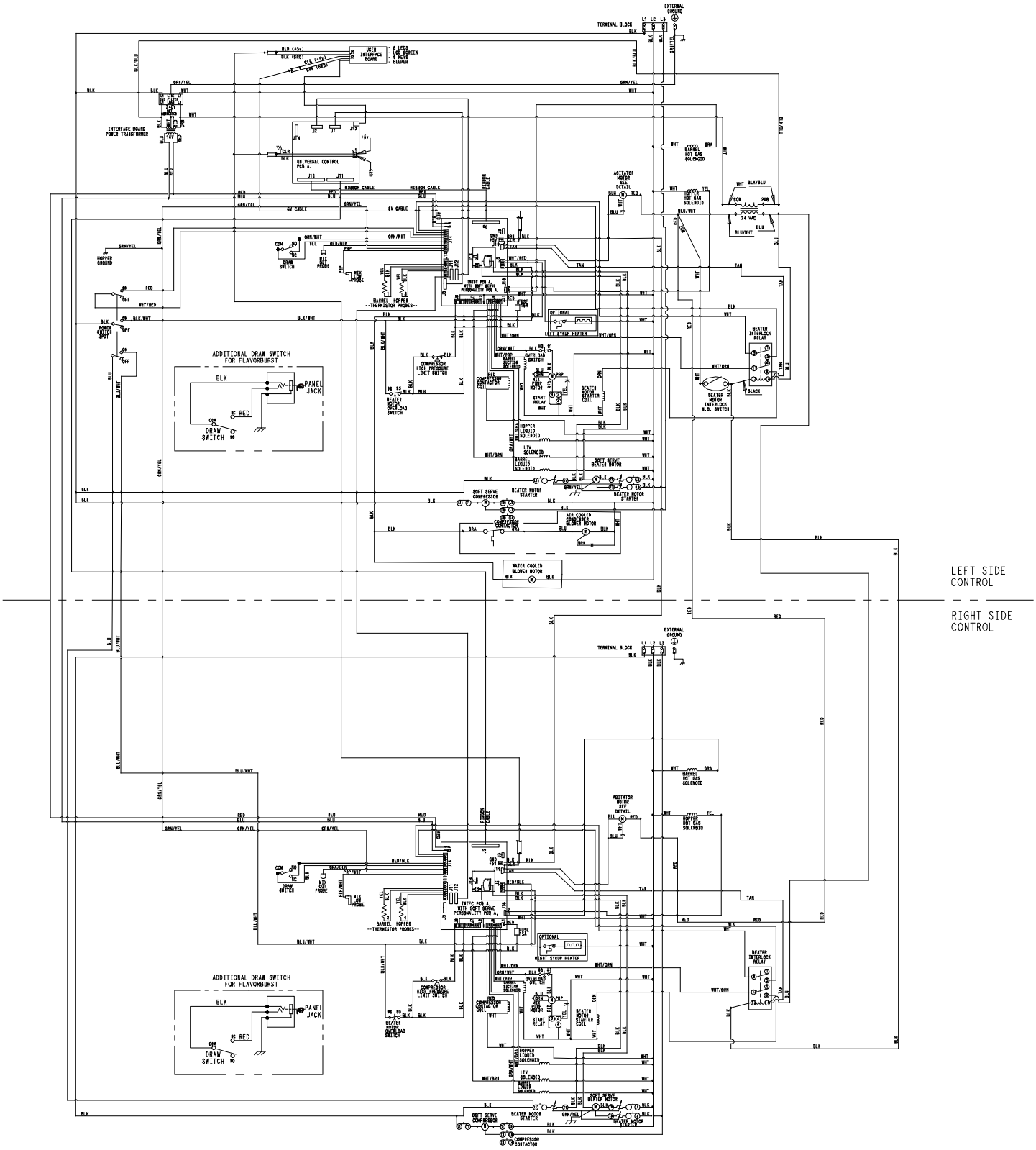
AGITATOR MOTOR DETAIL



ABOVE ELECTRICAL DIAGRAM SHOWS WIRING NECESSARY TO HOOK UP A COMPRESSOR USING A START AND RUN CAPACITOR (CSR) WITH A RELAY.

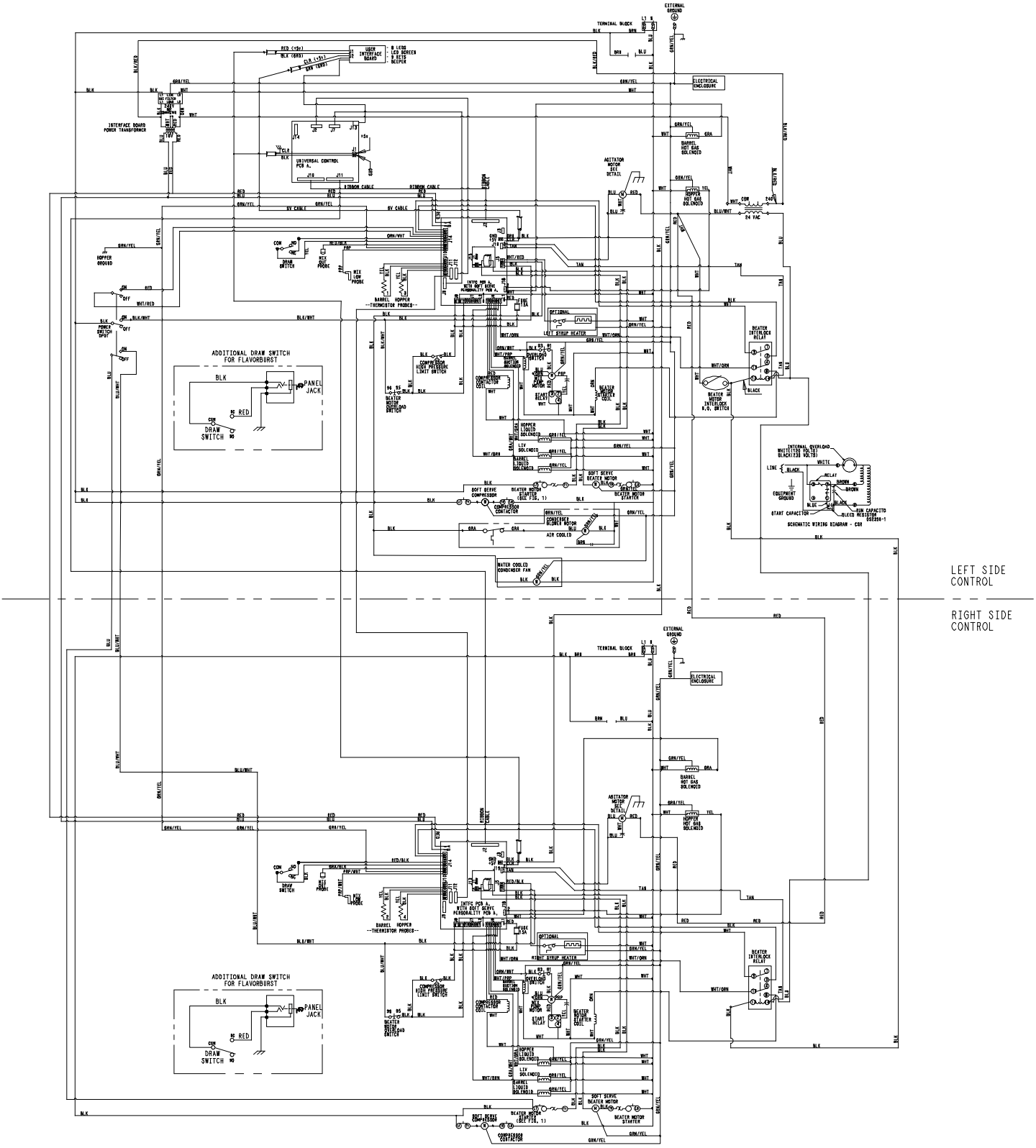
GROUND FRAME SECURELY

Model C716
059900-27
Inset
Rev. 2/08



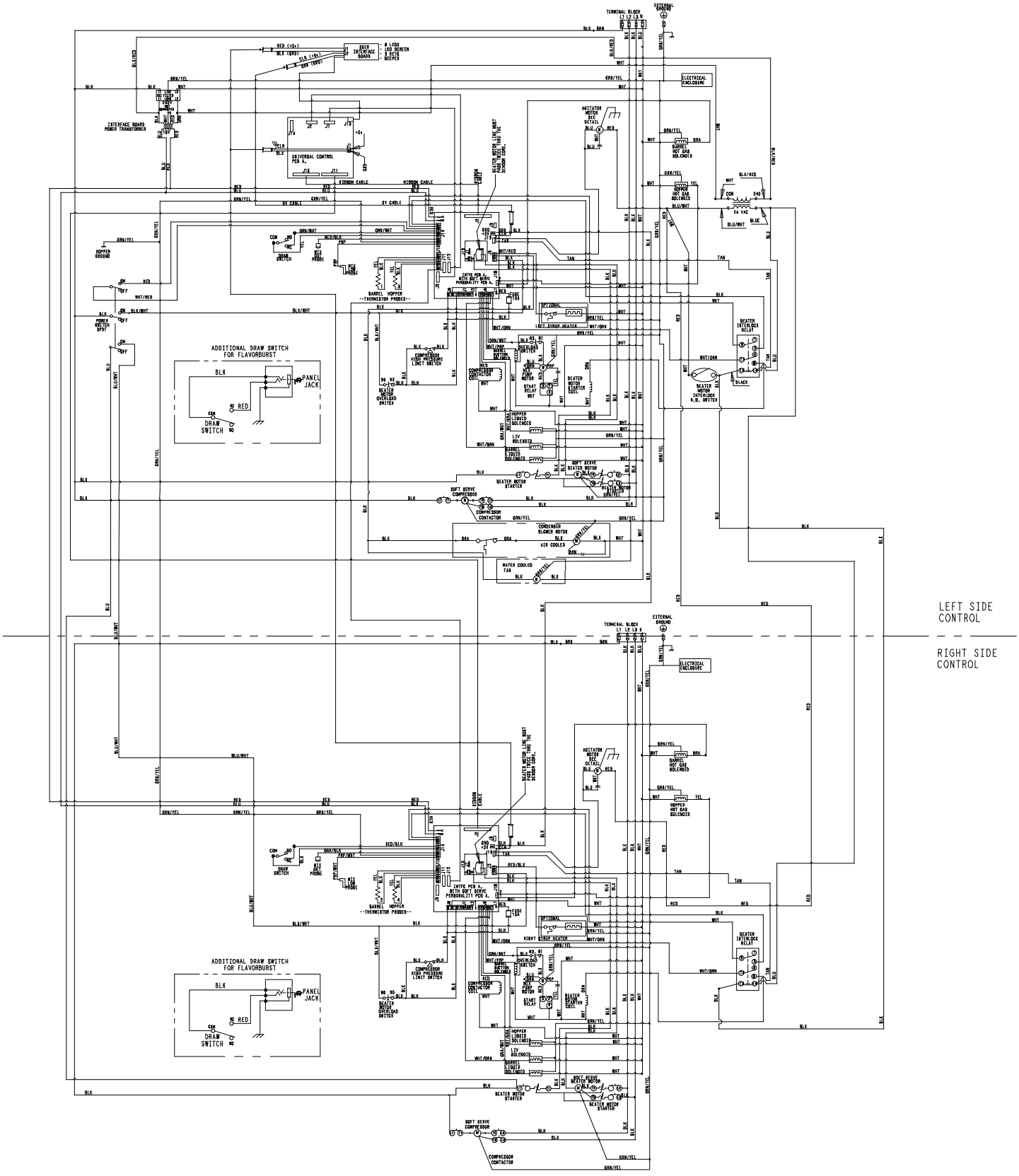
GROUND FRAME SECURELY

Model C716
059900-33
Rev. 2/08

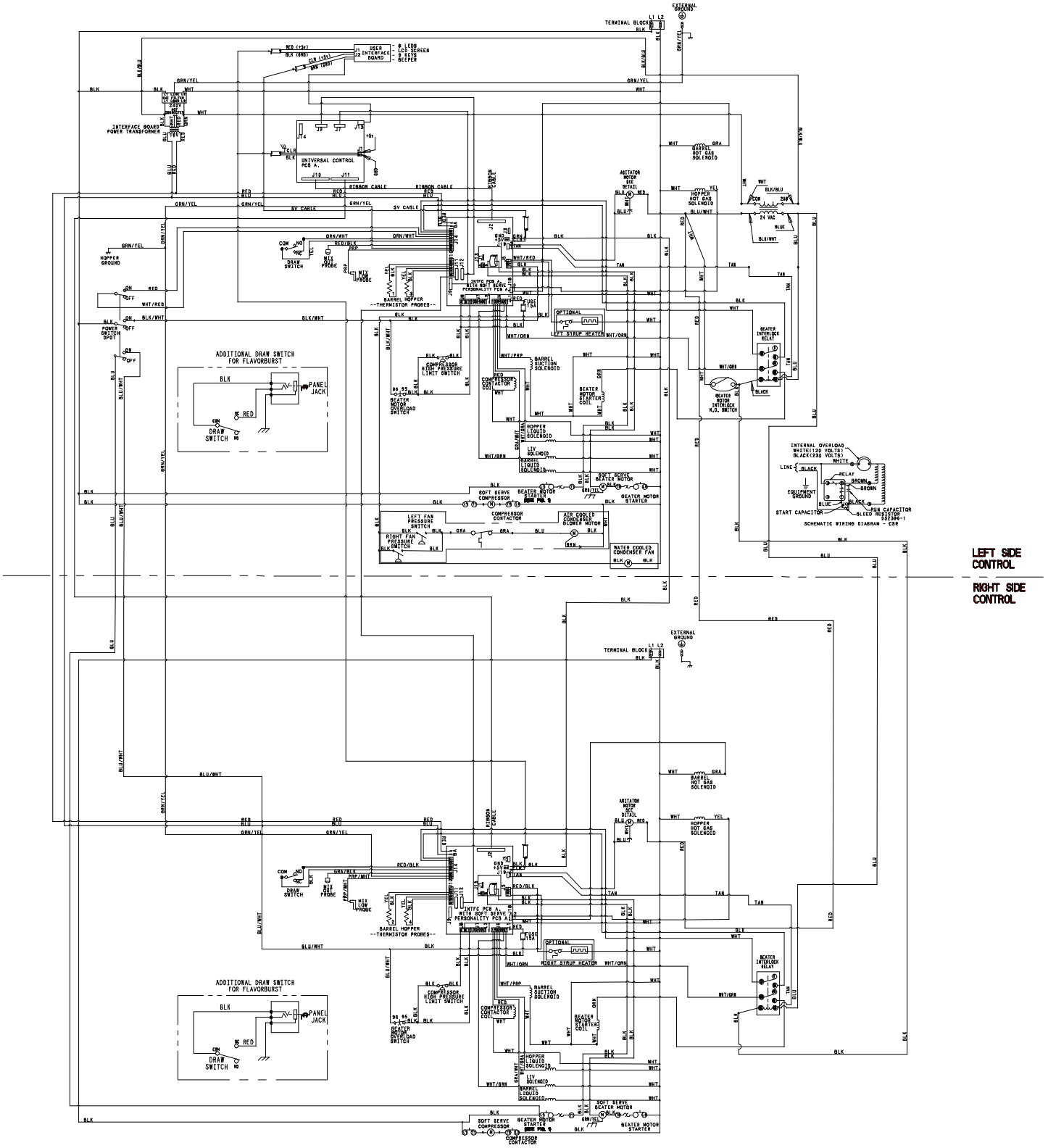


GROUND FRAME SECURELY

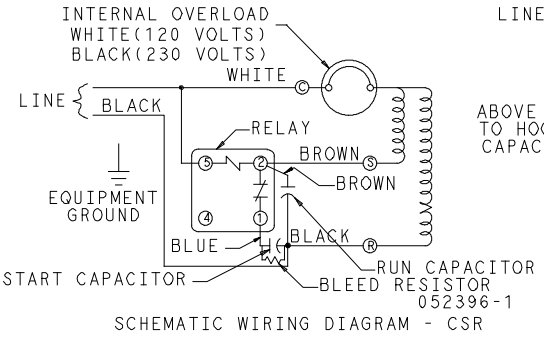
Model C716
059900-40
Rev. 2/08



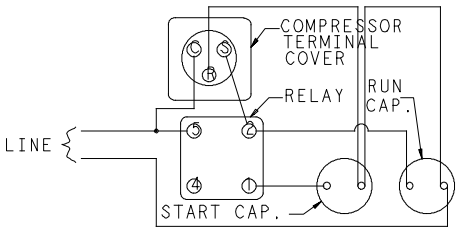
Model C716
059900-58
Rev. 2/08



Model C717
059901-27
5/09



SCHEMATIC WIRING DIAGRAM - CSR

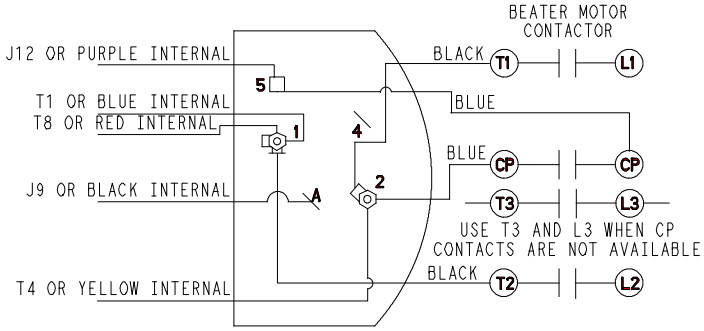


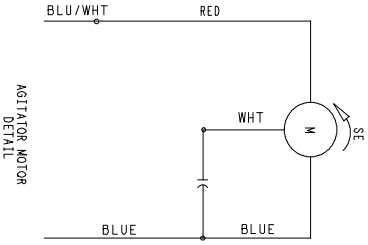
ABOVE ELECTRICAL DIAGRAM SHOWS WIRING NECESSARY TO HOOK UP A COMPRESSOR USING A START AND RUN CAPACITOR (CSR) WITH A RELAY.

BLK

GE/RBC BEATER MOTOR WIRING

NOTE: FOR CCWLE - BLUE INTERNAL ON #1,YELLOW INTERNAL ON #2

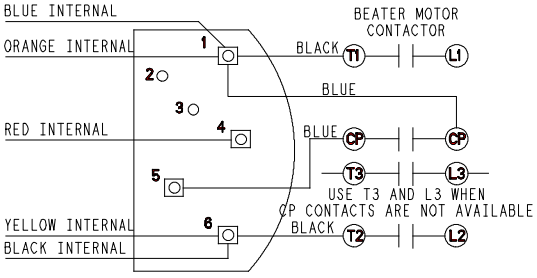




A.O. SMITH BEATER MOTOR WIRING

STEPS:
1) REMOVE BROWN JUMPER FROM BETWEEN TERMINAL #1 TO TERMINAL #5
2) MOVE BLUE INTERNAL (FROM MOTOR MAIN WINDING) FROM TERMINAL #5 TO TERMINAL #1.

NOTE: FOR CCWLE - BLUE INTERNAL ON #1, YELLOW INTERNAL ON #6



LEESON BEATER MOTOR WIRING

STEPS:
1) DISCONNECT WIRE T7 FROM TERMINAL 3
2) SPLICE BLUE WIRE AS SHOWN

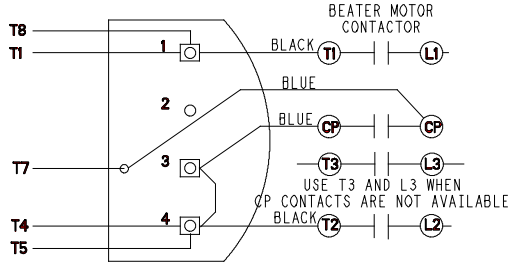


FIG. 1

Model C717
059901-27
Inset 1
5/09

JUMPER SETTINGS

	UVC3 BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
JP1	PINS 1 AND 2	JUMPER INSTALLED- NORMAL APPLICATIONS USING REFRIGERATED MIX.	YES
	PINS 1 AND 2	NO JUMPER INSTALLED-GENERAL MARKET CONFIGURATION USING NON-REFRIGERATED MIX. IGNORES HOPPER TEMPERATURE LOCKOUT PARAMETERS TO ALLOW ADDING NON-REFRIGERATED MIX INTO THE HOPPER.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP2	PINS 1 AND 2	DOMESTIC CONFIGURATION-JUMPER INSTALLED. HOPPER TEMPERATURE NOT DISPLAYED ON SCREEN/HEAT SYMBOL KEYS ONLY ACTIVE WHEN A LOCKOUT CONDITION HAS OCCURRED/ STANDBY KEYS DISABLED.	YES
	PINS 1 AND 2	INTERNATIONAL CONFIGURATION-JUMPER NOT INSTALLED. HOPPER TEMPERATURES DISPLAYED ON SCREEN/MANUAL HEAT CYCLE START BY SELECTING HEAT SYMBOL/STANDBY KEYS FUNCTIONAL.	
	PINS 3 AND 4	JUMPER STORAGE	NO
JP3	PINS 1 AND 2	JUMPER INSTALLED ENABLES AUDIBLE DEVICE LOCATED ON UVC3 CONTROL. DISABLED IN MODELS THAT HAVE AN AUDIBLE DEVICE ON THE CONTROL PANEL BOARD.	NO
	PINS 3 AND 4	JUMPER STORAGE	NO

	LEFT INTERFACE BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
W2			NO
W3		JUMPER INSTALLED-ACTIVATES SYRUP HEATERS	NO*
W4			NO
W5			NO
A	SOFT SERVE PERSONALITY BOARD	0-6 AMP BEATER MOTOR AMPERAGE RANGE	NO
B	SOFT SERVE PERSONALITY BOARD	0-12 AMP BEATER MOTOR AMPERAGE RANGE	YES

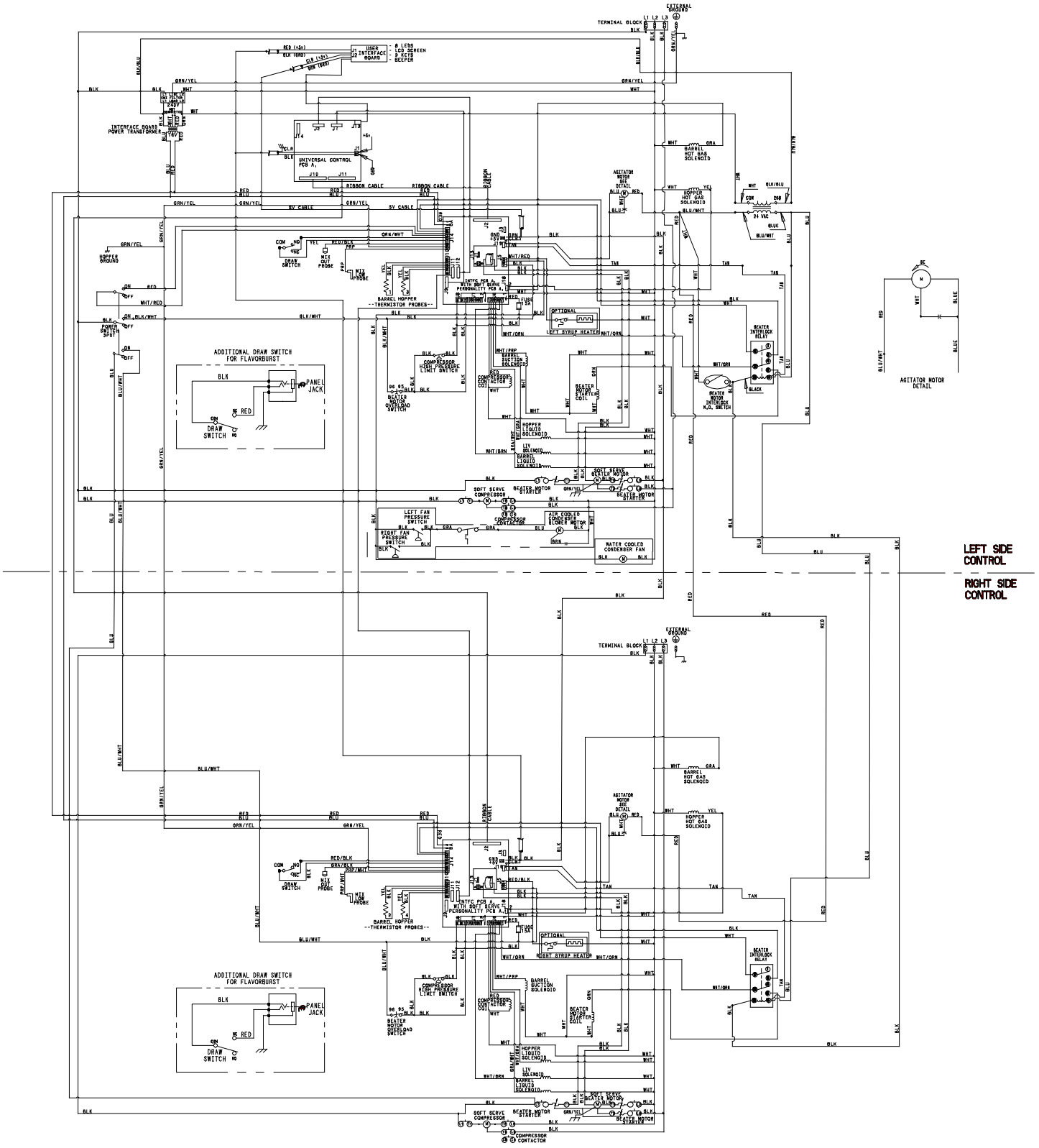
	RIGHT INTERFACE BOARD	FUNCTION	JUMPER INSTALLED INITIALLY
W2		JUMPER INSTALLED-ENABLES 59°F PRODUCT TEMPERATURE CHECK.	YES
W3			NO
W4			NO
W5			NO
A	SOFT SERVE PERSONALITY BOARD	0-6 AMP BEATER MOTOR AMPERAGE RANGE	NO
B	SOFT SERVE PERSONALITY BOARD	0-12 AMP BEATER MOTOR AMPERAGE RANGE	YES

*IF THE UNIT HAS THE INTEGRAL SYRUP OPTION -405, THEN THIS JUMPER SHOULD BE INSTALLED.

NOTE:

1. STATIC ELECTRICITY MAY CAUSE DAMAGE TO SOLID STATE COMPONENTS. ELIMINATE STATIC ELECTRICITY BY TOUCHING GROUNDED UNIT BEFORE HANDLING SOLID STATE COMPONENTS.

2. RED WIRE ON RIBBON CABLES MUST BE CONNECTED TO PIN 1 AT EACH END.



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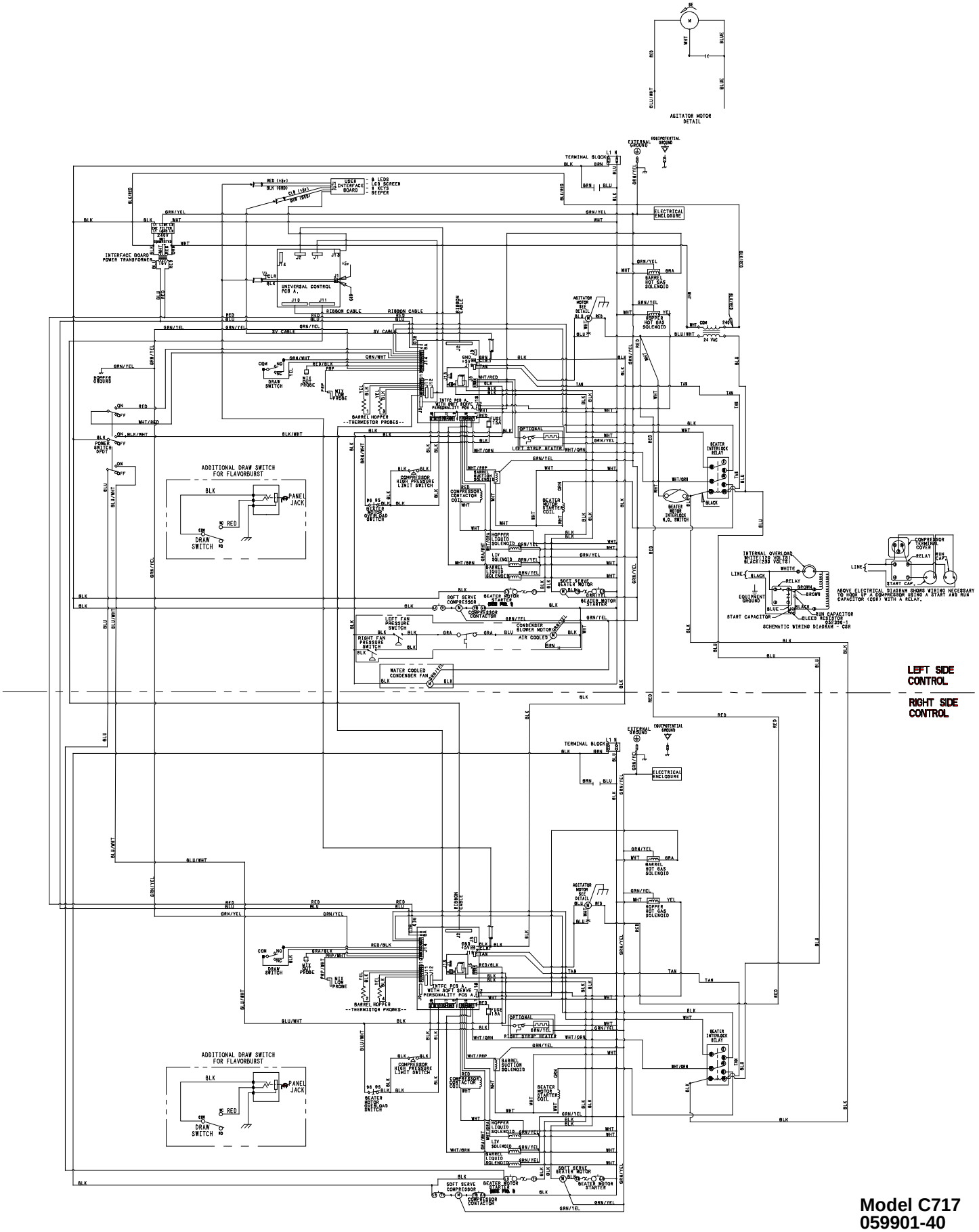
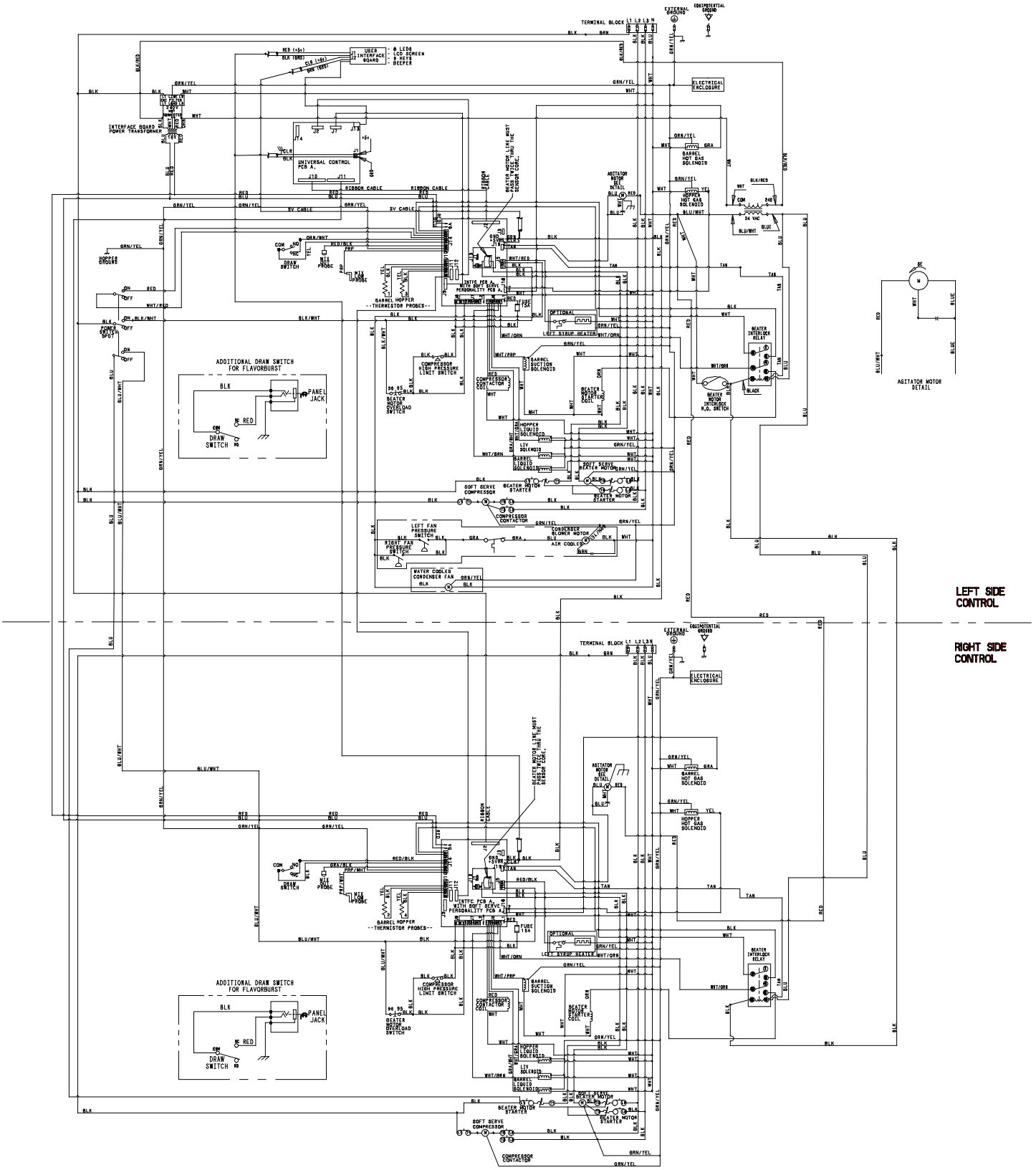


Model C717
059901-40
5/09



Model C717
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5/09